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VOLUME 15 ISSUE 6 NOVEMBER/DECEMBER 2018

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**SBS Takes Viewers Back to Where They Came From, page 43.**



14



18



36



## REGULARS

### 02 EDITOR'S WELCOME

**03 NEWS** Kayo Sports Streaming Service; New CEO for Sky NZ; Rebrand for SMPTE Show; Fox Sports Oz, NEP Australia Power 4K Live Sports with Dell EMC; Māori TV Streams Live; People on the Move.

### 46 INDUSTRY FOCUS

### 48 DATES AND RATES FOR 2019



## FEATURES

**12 TECHNICAL STANDARDS** Dolby's Patrick Griffiths New SMPTE President, DVB and HbbTV Release DASH Validation Tool, DPP and SMPTE Launch IMF for Broadcast.

**13 TAKING STOCK** Deltatre Acquires Massive Interactive

**14 ACQUISITION** Gittoes Gets Gritty with Sony 4K Cameras, ARRI Puts Cinematographers in Control, 8K Large Format, Blackmagic RAW, and more.

**18 SPORTSCASTING** Bathurst Races in 4K with Grass Valley; TRP and Brightside Live Cut Cord with Techtel; NZ Racing Gallops Toward HD; Sky Racing Expands with ATEME; Kicking Goals with AR.

**23 NEWS OPERATIONS** Talking Politics and Sport with Vizrt, Etere Powers News in Indonesia and the Philippines, New Tools for the Newsroom.

**28 POST-PRODUCTION** Method Behind Winnie the Pooh, cineSync Wins Tech Emmy, NZ Department of Post uses Resolve 15 for HDR and 4K Post, Latest Post Products.

**32 MEDIA IN THE CLOUD** Former NFA Deputy Receives AMIA Honour, DAMsmart Expands Archival Film Scanning Capabilities, SBS TV/DAMsmart Win Award for Excellence, New Cloud and Storage Solutions.

**36 AUDIO** Sony High Res Mics Record World's First 108-Key Piano, NZ Institute of Technology Goes Hybrid with Audient, Neumann at 90.

**40 RADIO** CRA GfK Radio Measurement Super Pilot, Radio Industry Unites to Grow Podcasting, The Studio Partners with Veritonic on Audio Logos, Oz Radio Continues with Ad Sales Automation.

**42 CONTENT DELIVERY** SBS Australia: Live from the Conflict Zone, MediaHub Delivers with Expanded Offering, Switch Media Partners with Telaria for Addressable OTT Ads.

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# The Sharper Image?

By Phil Sandberg



## 4K TV BROADCASTING HAS TAKEN ITS FIRST

concrete steps in ANZ with the launch of Foxtel in 4K and trials of terrestrial 4K UHD via DVB-T2 in Sydney, Queensland and Auckland, but further afield moves are on towards even higher resolutions.

There is an old saying that just because you can do something, it doesn't mean you should. In a world where there are broadcasters still migrating to high definition, and a small number of HD networks contemplating the launch of 4K channels, it's an adage that could easily apply to 8K services.

December 1st saw the launch in Japan of the world's first commercially available 8K TV service, BS8K. Broadcast by Japanese public broadcaster, NHK, alongside a new 4K channel (BS4K), the 8K offering will initially consist of a limited number of programmes repeated throughout the day. The programming slate will expand as the country heads towards the 2020 Summer Olympics in Tokyo, culminating in 8K coverage of the Games.

The 8K service (4320p) will offer a viewing resolution of 7680 × 4320 (33.2 megapixels), along with 22.2 multi-channel sound (requiring 24 speakers, including two subwoofers) arranged in three layers. The launch follows years of development and test events including the 2018 FIFA World Cup Russia, and the 2018 Pyeongchang Olympic Winter Games.

BSAT-4a (broadcasting satellite) will carry both the 8K and 4K services. It is capable of transmitting signals of both clockwise and anti-clockwise polarisation. "Going clockwise", in the 12 GHz band (11.7 to 12.2 GHz) BSAT-4a features 12 channels (simultaneous transmission possible), along with 16 repeaters (including 4 as spare). Capacity is the same for anti-clockwise signals (repeater configuration is separated from those of clockwise orientation). Meanwhile, in the 21 GHz band (21.4 to 22.0 GHz), BSAT-4a can provide two channels (bandwidth 250 MHz or more).

Of course, consumers will need equipment to receive and watch the new 8K channel. The current front runner in this regard is Sharp Electronics with its

Aquos range of decoders and televisions (a dedicated satellite dish is also required). Sharp has also released an 8K (60p) professional camcorder capable of shooting, recording, playback, and live output. The 8K TVs, meanwhile, retail for the best part of USD\$10,000.

As technological advancements go, the achievements of NHK and its partners cannot be disputed, but is there a market for 8K globally? Even in Japan – some would say especially – a great many domestic dwellings would be hard pressed to accommodate an 85-inch 8K display, let alone a 22.2-channel sound system. Then there is the great shift in the devices consumers use to watch video content.

According to Ooyala's recent Global Video Index Report, smartphone video starts topped 50% globally for the first time, a 13.2 percent year-over-year change and the largest in five quarters. Video plays on mobile devices (tablets and smartphones) surged 9.8% globally in Q2 2018, exceeding 62% of all online videos for the first time. Mobile video's share of all plays in the APAC region was 74% – the highest ever, and up 64% in two years. (For more, visit <http://go.ooyala.com/wf-video-index-q2-2018.html>).

For its part, Sharp Electronics also sees potential for 8K in market verticals such as medical, security, and infrastructure monitoring. The company has also been collaborating with telco NTT Docomo in experiments of multi-channel transmission of 8K video using 5G technology.

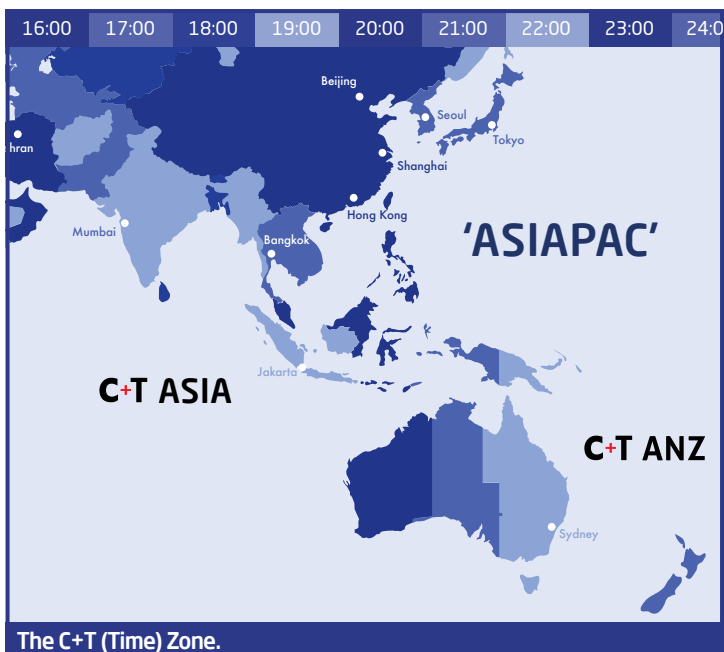
Meanwhile, the BS8K channel – not to mention the 2020 Olympics – will be a publicity goldmine for 8K imagery and technology.

Great viewing if you can get it.

Thanks for reading

**Phil Sandberg** – Editor/Publisher

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## C+T 2019 C+T DEADLINES

### AUSTRALIA/NEW ZEALAND EDITION

#### FEBRUARY ISSUE

Editorial Submissions:	16-01-19
Ad Bookings:	23-01-19
Ad Artwork:	30-01-19

### ASIA EDITION

#### MARCH-APRIL ABU DBS PREVIEW ISSUE

Editorial Submissions:	11-02-19
Ad Bookings:	13-02-19
Ad Artwork:	13-02-19

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## Kayo Streaming Service Offers Live and On Demand Sports

A NEW SUBSCRIPTION-BASED sports video streaming service, powered by FOX SPORTS Australia, ESPN and beIN SPORTS, has been launched under the banner of Kayo.

Aimed at the Australian market, Kayo's roster includes cricket, Aussie rules, rugby league, rugby union and motorsports, as well coverage from overseas of basketball, gridiron, football, golf and tennis. The service boasts over 30,000 hours of content each year across live sport, documentaries, entertainment shows and more, including content exclusive to Kayo.

Julian Ogrin, Kayo Sports CEO, said, "Kayo will provide a new way for Australians to experience sport, with the biggest Aussie sports and the best from overseas, plus game-changing features.

"Kayo is for people who just want sport, streamed on their terms. They want to watch what they want, when they want, how they want."

As well as conventional live and on-demand offerings, the service also allows subscribers to personalise their experience by selecting sporting codes and teams they want to follow, with

notifications reminding them when the big game is about to start. In addition, a "Key Moments" feature captures game highlights across selected matches, so users can get straight to the action they want to watch.

On selected devices, users will be able to stream up to four different games or events on one screen with 'SplitView', and a 'No Spoilers' function allows fans who have missed a match to switch off scores and watch the action as if it were live. Subscribers can also watch a match from the start, regardless of when they join the play. In addition, a Match Centre function presents stats along with pre and post-match videos.

Subscription packages include \$25 per month to access two concurrent streams, allowing viewers to watch games or events at the same time on two different devices; and \$35 per month for access to three concurrent streams for viewing on three different devices at the same time.



The service is available on iOS and Android devices, laptop, PC and on TV with Telstra TV, Apple TV and Chromecast Ultra.

Both Telstra and Cricket Australia are partnering with Kayo. Telstra customers can add the service to their home or broadband package, at home using a dedicated app on Telstra TV, or on the go via Telstra mobiles. Meanwhile, cricketing content will include the KFC BBL, Rebel WBBL and other competitions.

Visit <https://kayosports.com.au>

## New CEO for Sky NZ

SKY TELEVISION NEW ZEALAND has appointed Martin Stewart as Chief Executive Officer, replacing retiring CEO John Fellet. Mr Stewart comes with a wealth of media sector experience in the UK, Europe and the Middle East.

Mr Stewart has been CEO of OSN, a leading pay TV network in the Middle East and was CFO of Sky in the UK when Sky launched its digital platform. He also led the turnaround of Ono, a leading telecom operator in Spain, which is now part of Vodafone.

His sports credentials include being CFO of the Football Association, serving on the Board of the London Organising Committee for the Olympic and Paralympic Games for seven years and playing a key role in successful Premier League and UEFA broadcast renewals on behalf of Sky UK.

"I am excited at the opportunity to lead SKY as it continues its transformation from a traditional television broadcaster to a multi-platform entertainment business," Mr Stewart said.

"SKY is in a good place to take advantage of the opportunities that increased internet connectivity is offering, while retaining its important strategic position of being able to deliver content, particularly live sport, to 100% of the country. I'm looking forward to being part of the next phase of the SKY story."

SKY Chairman Peter Macourt said, "We are delighted to be appointing a CEO of Martin's calibre and international experience. We conducted an extensive global search for the right person to lead SKY, and had a strong field of candidates to



select from. Martin's experience, his leadership skills and his strong understanding of the opportunities and challenges of our sector made him a stand-out choice."

Mr Stewart will commence as CEO on the 21st of February, 2019.

Visit [www.sky.co.nz](http://www.sky.co.nz)

## Rebrand for SMPTE Australia Conference & Exhibition

A NEW NAME AND SCHEDULE are part of announced changes to the SMPTE Australia Conference & Exhibition for 2019 which will be staged under the banner of METexpo – the Media + Entertainment Tech Expo.

Slated for the International Convention Centre, Darling Harbour from Thursday 18th to Saturday 20th July, 2019, next year's show will also mark the first time the event has been staged on a weekend. The new format also sees the event reduced in length from four to three days.

Paul Broderick, the SMPTE Australia Section Chair said, "METexpo has been redesigned to advance the industry, with a view of inspiring, empowering and shaping the entire industry. We have taken on board both exhibitor and visitor feedback and as a response to the changes and disruptions shaping the industry focused on the updated direction."

As well as the latest technology, the new look METexpo will include networking opportunities, conference sessions, workshops, master-classes,

panel sessions, floor talks and accolades for tech excellence.

A call for papers has been issued with a firm deadline for abstracts of January 18, 2019.

Suggested topics include:

- Artificial Intelligence (AI) and Machine Learning (ML)
- Augmented Reality (AR) and Virtual Reality (VR)
- Encoding Developments – new codecs and use of machine learning to gain efficiencies
- Ultra-High Definition (UHD)
- High Dynamic Range Technology and Artistic Implementation
- Wide Colour Gamut Technology and Artistic Implementation
- Blockchain applications in media
- Microservices as it relates to media
- Virtualisation and Cloud Migration as they relate to media
- IP migration (SMPTE 2110)

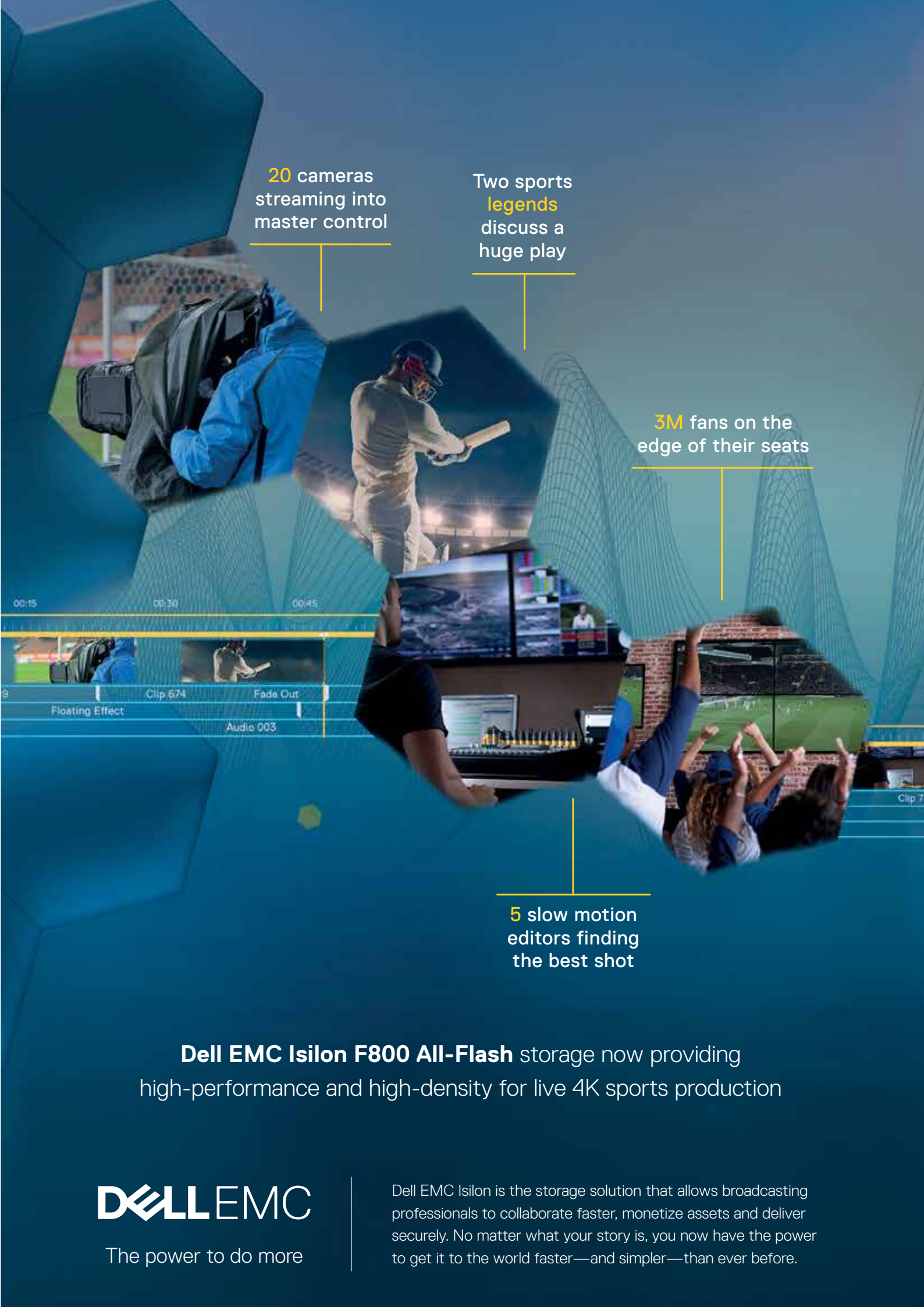
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ENTERTAINMENT  
**TECH expo**

CONFERENCE & EXHIBITION 18-20 JULY 2019

- Broadcast Technology – DVB-T2, ATSC 3.0, LTE-B
- Impact and application of 5G as it relates to media
- Internet of Things (IoT)
- OTT services – a threat or opportunity?
- Esports
- Online gaming as it relates to media
- Case studies on interesting developments such as major projects, IMF implementations, or remote UHD (4K) production and major sports
- Asset and Workflow Management
- IMF developments

Visit [www.metexpo.com.au](http://www.metexpo.com.au)





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## Blue Post Appoints Dave Hollingsworth as Director of Post-Production

**LEADING AUSTRALIAN POST-PRODUCTION COMPANY** Blue Post has expanded its team with the appointment of industry veteran, Dave Hollingsworth, as Director of Post Production.

After 14 years working overseas with some of the world's best directors including Peter Jackson, Guillermo Del Toro, Steven Spielberg, Taika Waititi and Neill Blomkamp, Dave returns to Australia to work alongside General Manager Rachel Knowles, and Managing Director Peter Millington.

Peter Millington said, "Dave will be responsible for the development and deployment of all technical and creative services provided by Blue Post and for extending those services into new markets.

"The role will draw upon Dave's 25 years of experience as an executive level post and VFX manager, as well as his expertise as a supervising colourist. The knowledge he's gained at renowned facilities such as Park Road Post Production, where he was a key part of the award-winning team that designed, built, and implemented the High Frame Rate 3D pipeline for *The Hobbit*, will compliment the investment we're making in new infrastructure," Mr Millington said.

"With the emergence of highly complex 4K and HDR post-production pipelines, connectivity between our facilities and our local and international clientele is more crucial than ever. We've just moved into a purpose-built facility in Port Melbourne and have added new SAN storage in our offices in Sydney and Melbourne. We're providing services for productions in every state and are connecting them all with dark fibre technology. We're fortunate to have someone like Dave come on board to oversee these developments."

Mr Hollingsworth said, "After working for 14 years in three different international film and TV markets, it's an absolute pleasure to take up such a great role in Australia among the best in the business. Blue Post has a fantastic reputation, gaining respect from clients in Australia and abroad for its high-



quality work, technical innovation, and excellent client service over the past 15 years. I am really excited to be joining the team in Sydney to help build on that reputation and grow the business into the future."

Blue Post is a full-service TV and film picture finishing company with offices in Port Melbourne and Fox Studios in Sydney. Services include rushes and dailies (on set, near set, and in facility), final conform, colour, online, titles, VFX, mastering, QC and deliverables, plus edit room and equipment rental.

Blue Post is at the forefront of latest technology and workflows including Dolby Vision HDR. Recent credits include: *Picnic at Hanging Rock* (Foxtel/Amazon Prime), *The Flipside* (20th Century Fox Films), *Wentworth* (Fox/Netflix), *Romper Stomper* (STAN), *Chosen* (iQIYI/Netflix) and *Mr In Between* (FOXTEL and Sundance).

Visit [www.bluepost.com.au](http://www.bluepost.com.au)

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## PEOPLE ON THE MOVE

### THE SPECIAL BROADCASTING

**SERVICE (SBS)** Board of Directors have announced the appointment of James Taylor as the new Managing Director of SBS.

Taylor was made SBS's Acting Managing Director on the 2nd of October 2018 following the departure of Michael Ebeid AM after seven and a half years in the role. He joined SBS six years ago and as SBS's Chief Finance Officer, has played an instrumental role in the development of SBS's corporate strategy, digital evolution and ongoing effective operation during that time. He has more than 18 years' experience in media and telecommunications across corporate and public sector organisations in Australia and abroad.

### NZ BROADCASTER SHANE TAURIMA

(Rongomaiwahine, Ngāti Kahungunu) has joined the Māori Television Executive team in the interim position of Deputy Chief Executive – Organisational Transition, to lead

the organisation's change work programme through until 30th June 2019.

Mr Taurima brings more than 25 years' experience across media and broadcasting including General Manager Māori and Pacific Programmes for Television New Zealand, Chief Operating Officer for the North Island Whānau Ora Commissioning Agency, the senior ministerial advisor to the Minister for Māori Development and managed national Māori radio news service Ruia Mai.

### CLOUD VIDEO DEVELOPER, LINIUS

**TECHNOLOGIES**, has appointed Stephen Pech as its VP of Global Channels and Alliances.

Based in Linus' headquarters in Melbourne, Australia, Pech will drive and define the company's growing channel program – including resellers, distributors and ISVs – across APAC, EMEA and North America. Linus has already formed a partnership with IBM, and is also

available on the IBM Cloud, Microsoft Azure and Amazon Web Services.

A former head of Telstra's ICT channel distribution division, Pech previously held positions with Fujitsu Australia and Symantec, most recently as the director of APAC sales for software company

### BILL HASTINGS HAS BEEN

**APPOINTED** as chair of NZ's Broadcasting Standards Authority (BSA). A District Court Judge, Hastings has considerable experience of quasi-judicial bodies including Crown entities. He was New Zealand's tenth Chief Censor from 1998 to 2010 and has also been a member of the Video Recordings Authority, the Indecent Publications Tribunal and the Film and Literature Board of Review.

### RAINER RHEDEY HAS BEEN

**APPOINTED** as Seven West Media's Chief Technology and Information Officer.

Mr Rhedej joins SWM from Fairfax

Media where he was Group General Manager of IT.

In the newly created role of CTIO, Mr Rhedej will be responsible for Seven West Media's IT and technology systems and infrastructure.

### SPENCER PREECE HAS TAKEN ON

the role of Sales Manager at Vizrt Australia. He formerly served as Sales Manager with Madison Technologies, National Account Manager – Broadcast and AV with Ross Video and Regional Sales Manager with Sony Australia.

### PHIL VINCENT HAS BEEN

**APPOINTED** Post Production Supervisor for 'The Unlisted' at Aquarius Films Llp. His previous roles include Post Production Supervisor and Consultant with Victry Post, Post Technical Producer with Eureka Productions, and Technologist Team Leader with the Australian Broadcasting Corporation (ABC).



## PAM Range – PAM2-IP



The PAM-IP-3G range from TSL Products is a fully comprehensive Audio Monitoring Solution designed for use in SMPTE 2022-6 and SMPTE 2110 environments.

Developed specifically to address the requirements of customers needing to monitor uncompressed SMPTE 2022-6 and SMPTE 2110 sources, the PAM-IP 3G is equipped with 2 x 10Gig/E interfaces for direct connection into COTS IP fabrics.

Engineers and Operators familiar with traditional Audio Monitoring unit operation can now monitor 2022-6 and 2110 uncompressed IP sources without having to re-train or understand IP networks.

As with the PAM1 MK2 and PAM2 MK2, the following functionality remains possible, even when working with 2022-6 and 2110 uncompressed IP sources:

- Video Confidence monitoring of 2022-6, 2110 uncompressed IP and 3G/HD/SD-SDI sources directly on the front panel.
- Comprehensive Loudness Monitoring, complete with Histogram display.
- Full monitoring (including Metadata) of Dolby encoded sources – PAM2-IP only.



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## Māori Television Streams Live

New Zealand's Māori Television is furthering the trajectory of te reo Māori (Māori language) into the digital age with the addition of the new 'Live' function on the Māori Television website.

Viewers can now enjoy the best of the channel's programming, direct from [www.maoritelevision.com](http://www.maoritelevision.com), which now live streams both Māori Television and Te Reo channel broadcasts in real time, at the same time as linear broadcast. There's no need to install an app. Anyone in Aotearoa with a laptop, PC or smart device with access to an internet connection and a web browser is able to view.

Shane Taurima, Māori Television's Deputy Chief Executive stated, "We are proud to provide our viewers the opportunity to further engage with our wealth of local content and to bring te reo Māori and tikanga Māori through into this rapidly changing digital space. The addition of our 'Live' functionality ensures our viewers are now more able than ever to dip into our entertaining and engaging content that reflects all stages of the Māori language learning journey."

A refreshed TV guide has also been added to Māori TV website. With a click

on any designated program in the schedule, viewers will be taken directly through to their chosen show on demand, where all available catch-up episodes await.

These new additions join a wealth of available content including news, kapa haka, and the te reo Māori platform for the under 12s – Tamariki Hā!

To get the best out of Māori Television 'Live', users are encouraged to update their Apple, Android, or Microsoft operating systems to the latest available version.

Compatible browsers include:

- Google Chrome Win7+, Android 8+, iOS9+
- Mozilla FireFox Win7+
- Internet Explorer 11+ Win7+
- Microsoft Edge Win10+
- Safari iOS9+, MacOS 10.10

Visit [www.maoritelevision.com](http://www.maoritelevision.com)

## Oz, NEP Australia Power 4K Live Sports with Dell EMC

**DELL EMC HAS ANNOUNCED THAT FOX SPORTS** Australia and NEP Australia have each selected Dell EMC's Isilon F800 all-flash scale-out NAS storage solution to power the production of live sport in 4K UHD video resolution. This content is broadcast on Foxtel's new dedicated Foxtel 4K channel (Channel 444).

To meet the complex technical requirements for the new 4K live sports production, FOX SPORTS needed a storage platform that could provide extreme performance and scalability for live video ingest and highlights editing in its Artarmon NSW production facility. In addition, NEP Australia has deployed Isilon F800 storage into two of its premium 4K-capable outside broadcast vans – providing extreme performance density for their client FOX SPORTS.

"This project will serve as a benchmark as we transform our business toward a new 4K digital era," said Stephen Edwards, Director of Technology and Infrastructure at FOX SPORTS Australia. "We are confident in Dell EMC's ability to support this first-of-its-kind 4K live workflow because of their industry expertise and our longstanding partnership through the years."

Robert Oliver, Head of Technology at FOX SPORTS Australia has been driving the 4K Live project from inception. "We have been using Isilon as our core media production storage for many years. After our transition to the new Isilon Gen6 platform, we wanted to test the limits of the all-flash F800 model and found that it exceeded our performance expectations when integrated with EVS and Adobe."

The new Foxtel 4K Channel (Channel 444) broadcasts in 4K resolution and at twice the frame rate of Foxtel's HD channels – allowing for high-quality smooth reproduction of fast-moving live sports action. This results in an increase in throughput of live capture video streams by 4x, necessitating an update to the existing production storage and network architecture.

FOX SPORTS had to substantially upgrade for the 4K live workflow, which requires ultra-high-speed storage capabilities both for the outside broadcast vans and inside the central production facility. Up to 30 cameras in the sporting venues will capture footage in both 4K and HD, which will be produced in the outside broadcast vans using EVS live production servers together with Dell EMC's all-Flash Isilon F800 IP-based storage. Video editors producing highlights and other packages use Adobe Premier Pro working with 4K and HD

clips directly connected to the Isilon F800. Further post-production and content repackaging takes place in real-time back at the FOX SPORTS HQ. Clips from the OB Van can also be replicated back to FOX SPORTS using Dell EMC Isilon's SyncIQ technology – taking advantage of the high-bandwidth IP data network provided from the venue by Telstra Broadcast Services. These clips can then be edited into packages for news and hosted programs, and broadcast on Foxtel plus OTT delivery to mobile and web platforms.

"Deploying high-density all-Flash Isilon storage into our 4K OB vans is the next step in our Live IP production evolution," said Marc Segar, Director of Technology, NEP Australia. "NEP Australia has been on a path of innovation and production workflow efficiency for the past two years, since successfully implementing the Andrews' Hubs for remote live production in Sydney and Melbourne."

A critical success factor for the Isilon F800's all-flash architecture is its ability to absorb both the high throughput and high concurrency associated with the project. This capability, delivered in a convenient 4RU form factor, allowed the F800 systems to be deployed into the OB vans supplied by NEP as well as substantially reducing the data-centre rack space, power and cooling needed at FOX SPORTS HQ.

Dell EMC has been working with FOX SPORTS since 2012, deploying Dell EMC Isilon scale-out NAS storage solutions for its content creation and distribution workflows.

"This solution signals a transition to next-generation all-IP 4K content creation and delivery workflows in Australia and internationally," said Charles Sevier, CTO Unstructured Data Solutions, Dell EMC. "We take great pride in having our innovative, Isilon all-flash storage solution play an important part in the production infrastructure that will enable FOX SPORTS and NEP to provide cricket fans worldwide with a significantly differentiated service and truly immersive viewing experience."

For further information contact [Charles.Sevior@emc.com](mailto:Charles.Sevior@emc.com)

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## IN BRIEF

**BRIGHTCOVE HAS ANNOUNCED**

that its video platform has been selected by Metranet, a subsidiary of Telkom Indonesia, to launch OONA, a mobile app designed to deliver both live linear and VOD experiences to audiences on the go. The OONA app features chat bots, chat with other viewers, offline caching, parental controls, screen capture with drawing and sticker editing, a virtual wallet, and a 360-video player. The Brightcove video platform will underpin the live and on-demand video experience on the OONA app, streaming 60 live channels, as well as serving video adverts with server-side ad insertion technology (SSAI).

Visit [www.brightcove.com](http://www.brightcove.com)

**KOREAN CABLE OPERATOR CJ HELLO**

has deployed ATEME's TITAN LIVE solution for an innovative HD project which enables CJ Hello to virtualise its video headend and service HD channels using terrestrial modulation without a STB, and reach subscribers in 23 South Korean regions.

Based on the bandwidth efficiency of MPEG-2 in conjunction with ATEME's TITAN Live, CJ Hello is able to save bandwidth and add additional HD channels.

Visit [www.ateme.com](http://www.ateme.com)

**VIACCESS-ORCA IS PARTNERING**

with RedSo, a leading Asian mobile app development company, on an OTT solution for pay-TV operators and service providers. Integration between RedSo's Android-based user interface and VO's TV platform will provide operators with a readymade solution for managing and delivering OTT services. Through RedSo's UI, operators can support 4K content, and deliver a consistent user experience across low-end and premium Android STBs. The UI

has been integrated with VO's TV platform to streamline the delivery of TV services. Using VO's TV platform, operators can manage, deliver, and monetise multiscreen content.

Visit [www.viaccess-orca.com](http://www.viaccess-orca.com) and [www.redso.com.hk](http://www.redso.com.hk)

**JKN GLOBAL MEDIA PCL THAILAND**

(JKN) has invested in the Dalet's Galaxy five Media Asset Management (MAM) and Workflow Orchestration platform to optimise content production and delivery across traditional, OTT and social media distribution outlets. The installation enables a comprehensive workflow transformation, taking the Thai-based media organisation from manually managing assets to automated processes that optimise production and delivery efficiencies across the entire media operation.

Visit [www.dalet.com](http://www.dalet.com)

**GRAPHICS, MAM AND PLAYOUT**

**PROVIDER** Etere has seen its systems recently installed at CNBC Indonesia and the Philippines' ABS-CBN network.

CNBC Indonesia leverages the technology of Etere ETX to manage its channel automation. The system gives the news channel intuitive master control complete with touch screen features. CNBC Indonesia also uses the Etere Media Enterprise Resource Planning (MERP) framework to power its automation and playout.

Meanwhile, the Philippines' ABS-CBN has implemented Etere's Closed Caption Software which provides a digital platform for the creation, management, burning, playout and conversion of subtitles, including live captions, open captions and closed captions.

Visit [www.etere.com](http://www.etere.com)

**ASIA SATELLITE****TELECOMMUNICATIONS**

**COMPANY** has received its second patent from the United States Patent and Trademark Office (USPTO). Entitled, 'Methods and Systems for Improving Spectrum Utilisation for Satellite Communications' (US Patent No. 10,050,698 B2), the new patent details methods and systems to mitigate the imbalance of uplink and downlink spectrum allocation in satellite communications. Through digitalising uplink spectrum with an onboard digital channelising processor (DCP), unused Fixed Satellite Service (FSS) guard bands in the uplink spectrum, whether from the same band or different bands such as C-, Ku- or Ka-band can be extracted, fully harvested and put into use.

Visit [www.asiasat.com](http://www.asiasat.com)

**SINGAPORE'S STARHUB**

has launched its brand new StarHub Go Streaming Box, powered by the Ooyala Online Video Solution. The box is the first in the world to run on the Operator Tier version of Android TV Oreo, and gives viewers access to pre-loaded StarHub's content, partners apps, as well as the Google Play Store. Ooyala's Online Video Solution simplifies and streamlines the OTT content preparation and publishing process for StarHub.

Visit [www.ooyala.com](http://www.ooyala.com)

**DATAxu, A PROVIDER**

**OF PROGRAMMATIC** marketing software, has signed a Memorandum of Understanding (MOU) with SK Broadband, the South Korean operator of IPTV service Btv, OTT service Oksusu, and TV Commerce service SK Stoa. With this agreement, SK Broadband is now able to utilise dataxu's TotalTV offering, which improves the way TV campaigns are

planned and executed by enabling targeting at the household level, in real-time, via dataxu's self-serve DSP, Touchpoint.

Marketing professionals can now buy advanced audiences on a household-by-household basis, powered by SK's view of the Korean consumer, who are watching Btv's premium VOD and Live Linear services on SK Broadband set top boxes.

Visit [www.dataxu.com](http://www.dataxu.com)

**MALAYSIA'S MEDIA PRIMA**

**BERHAD** and Dailymotion, a video player technology and content discovery platform, have signed a memorandum of understanding that will see Media Prima video content available on Dailymotion which attracts a global monthly audience of over 300 million.

Dailymotion can be accessed on the web, mobile devices (iOS, Android) and over-the-top devices including Apple TV, Android TV, Amazon Fire TV and Xbox One.

The move will also allow Media Prima to generate revenue through programmatic advertising and follows the announcement that its OTT service, tonton, will now be offered at no cost.

Visit [www.dailymotion.com/au](http://www.dailymotion.com/au) and [www.mediaprima.com.my](http://www.mediaprima.com.my)

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## Blackmagic MultiView 4 HD lets you monitor up to 4 different SD and HD sources on the same display at the same time!

Blackmagic MultiView 4 HD lets you simultaneously monitor 4 different SDI video sources on a single display! Full frame re-synchronization on every input lets you even monitor sources with different frame rates. Each view is an independent monitor with overlays such as custom labels, audio meters and more. MultiView 4 HD features both 3G-SDI and HDMI outputs so you can use traditional SDI displays or even low cost big screen televisions!

With three great models to choose from, Blackmagic MultiViews can be used for SD, HD and Ultra HD monitoring virtually anywhere! When you have more than four sources, MultiView 16 is perfect for larger installations, plus it can be controlled remotely over Ethernet!



Blackmagic MultiView 4 HD ..... **\$285**  
 Blackmagic MultiView 4 ..... **\$755**  
 Blackmagic MultiView 16 ..... **\$2,285**

Learn more at [www.blackmagicdesign.com/au](http://www.blackmagicdesign.com/au)





## Dolby's Patrick Griffis New SMPTE President

**SMPTE HAS ANNOUNCED THE ELECTION** of officers and governors for the 2019-2020 term. Patrick Griffis, Vice President of Technology in the Office of the CTO at Dolby Laboratories, will take office as the new SMPTE President as of the 1st of January, 2019.

"Pat's dedication to SMPTE is truly remarkable, and his passion, energy, and expertise will be vital to the Society's success in meeting its ambitious goals for the coming years," said current SMPTE President Matthew Goldman, Senior Vice President of Technology at MediaKind.

Griffis, who currently serves as SMPTE Executive Vice President and has previously held roles including Education Vice President, Secretary-Treasurer, and U.S. Western Region Governor, will serve a two-year term as SMPTE President. Goldman will continue to serve as a SMPTE officer on the Executive Committee of the Board of Governors as the Society's immediate past president.

Other incoming SMPTE officers elected for the two-year 2019-2020 term include Hans Hoffmann, Senior Manager, Media Production Technologies, for the European Broadcasting Union (EBU) Technology and Innovation department, who will serve as Executive Vice President, Sara Kudrle, Product Marketing Manager at Imagine Communications will serve as Education Vice President, and John E. Ferder, Director of Engineering at MultiDyne Video and Fiber Optic Systems will serve as Secretary-Treasurer.

Newly elected SMPTE Governors include Sylvain Marcotte, Systems Architect and Product Owner at Grass Valley for the Canada Region, Marina Kalkanis, CEO at M2A Media for the United Kingdom Region, William T. Hayes, Director of Engineering and Technology at Iowa Public Television for the USA – Central Region, Michael DeValue, Director of Technology Standards and Strategy at Walt Disney Studios for the USA – Hollywood Region, and Rosemarie Lockwood, northeastern U.S. Regional Sales Engineer at Belden for the USA – New York Region.

Six Governors were re-elected: Masayuki Sugawara, Executive Engineer at NEC Corporation for the Asia-Pacific Region, François Abbe, President and Founder of Mesclado for the Europe, Africa, Middle East, Central and South America Region, Gary Mandle, consultant at Outthand Displays, for the USA – Western Region, Michael Koetter, Senior Vice President for Digital Media Systems at Turner for USA – Southern Region, James M. Burger, partner at Thompson Coburn LLP, for the USA – Eastern Region, and Christopher Fetner, Director, Post Partnerships and Integrations (PPI) at Netflix, for the USA – Hollywood Region.

Governors who were not up for re-election and who continue on the SMPTE Board of Governors include Merrick (Rick) Ackermans of MVA Broadcast Consulting (USA – Southern Region); Paul Briscoe of Televisionary Consulting (Canada Region); Mark Harrison of the Digital Production Partnership (DPP) (United Kingdom Region); Siegfried Foessel of Fraunhofer IIS (EMEA and Central and South America Region); Paul Chapman of SIM Group (USA – Hollywood Region); Renard Jenkins of PBS (USA – Eastern Region); Ward Hansford of Grass Valley (Asia-Pacific Region); and Ben Waggoner of Amazon (USA – Western Region).

Officers who were not up for re-election and who continue to serve on the SMPTE Board of Governors Executive Committee include SMPTE Standards Vice President Bruce Devlin of Mr. MXF and SMPTE Membership Vice President Peter Wharton of Happy Robotz LLC.

Visit [www.smpte.org](http://www.smpte.org)



## DVB and HbbTV Release DASH Validation Tool

**THE HBBTV ASSOCIATION HAS ANNOUNCED** it has collaborated with DVB, an industry consortium that develops open interoperable technical specifications for the delivery of digital media and broadcast services, to compile a DASH validation tool.

The newly released tool conducts checks of ISO/IEC 23009-1 MPEG-DASH media presentation descriptions (MPDs) and segments to ensure conformance with DASH-related specifications from DVB and HbbTV.

"We are excited about the release of this DASH validation tool, which will help application developers and content providers verify their services are compliant with the HbbTV/DVB DASH profiles, enabling them to offer compelling hybrid services enhancing the viewer experience," said Vincent Grivet (TDF), Chair of the

HbbTV Association.

DVB-DASH defines the delivery of live and on-demand TV content over the internet via HTTP adaptive streaming. It is referenced in the HbbTV specifications, which means that many devices in the market currently support this profile. Content providers across Europe have deployed services using DVB-DASH.

The DASH validator source code is available free via <https://github.com/Dash-Industry-Forum/Conformance-Software>. Users can easily validate their content through the web-based interface or build a local copy for use in a production workflow within their own environment.

Visit [www.hbbtv.org](http://www.hbbtv.org)

## DPP and SMPTE Launch IMF for Broadcast

**THE DIGITAL PRODUCTION PARTNERSHIP (DPP)** has announced the release of a new technical specification to support the mastering and international exchange of content: SMPTE TSP 2121:2018 IMF Application DPP (ProRes). The new specification builds on the existing Interoperable Master Format (IMF) standard developed by the Society of Motion Picture and Television Engineers (SMPTE), which was designed for streamlining the distribution of premium feature film content.

IMF Application DPP (ProRes) makes it possible to automate the content supply chain, eliminate the unnecessary creation of multiple versions, enable workflow efficiencies, and reduce QC and archive storage requirements, while maintaining the quality of the original asset. The result is significant cost and time savings.

The creation of SMPTE Technical Specifications (TSPs) will enable industry groups and business users, such as the DPP, to constrain standards to enable new workflows and international interoperability.

SMPTE TSP 2121:2018 IMF Application DPP (ProRes) is the first

SMPTE Specification, and represents a significant milestone in industry collaboration. The DPP have worked with the EBU (European Broadcasting Union), NABA (North American Broadcasters Association) and the IMF User Group to create the specification.

Following publication of the specification, the DPP will launch a compliance testing programme for IMF for Broadcast and Online tools. This will provide buyers and sellers with the confidence that DPP tested tools and IMF packages will be interoperable and can be exchanged globally.

The launch of the specification follows the release of 'The Business Benefits of IMF' to support the DPP's broadcaster, supplier and distributor members in the adoption of IMF Application DPP (ProRes).

The DPP will continue to work with partners to ensure that the IMF specification is implemented globally, providing support for the production and post communities as they migrate to IMF deliveries.

Visit [www.smpte.org](http://www.smpte.org) and [www.digitalproductionpartnership.co.uk](http://www.digitalproductionpartnership.co.uk)



## Deltatre Acquires Massive Interactive

**ITALIAN SPORTS PRODUCTION SOLUTIONS PROVIDER** Deltatre has acquired Massive Interactive, the OTT software company which was established in Sydney in 1996 and is headquartered in London.

As a company, Massive will continue to operate as an independent entity. Combined, the companies form the largest independent OTT solution provider in the world. The move also adds deeper operations in Asia and the South Pacific for Deltatre and expands the company into the entertainment industry.

"Deltatre is one of the most prominent and experienced technology companies in the world of live sport and therefore the ideal partner to help accelerate our global growth strategy," said Ron Downey, Massive Co-Founder, and CEO. "The integration of our targeted UX platform, Massive AXIS, with Deltatre's robust product portfolio will combine to offer our customers a highly scalable, quick-to-market solution that drives engagement and increase the profitability of over-the-top video services. We are also very impressed with Deltatre's people and culture and feel that we share the same values. By coming together, we are creating a business that will undoubtedly be the leading B2B vendor for live and OTT video platforms globally."

"This shift to OTT is accelerating throughout the world, and the ability to customise individual viewing experiences and create genuine consumer engagement is vital to the movement. Massive's next-generation user interface and audience engagement software are proven to drive ARPU,"

"This shift to OTT is accelerating throughout the world, and the ability to customise individual viewing experiences and create genuine consumer engagement is vital to the movement."

said Giampiero Rinaudo, Deltatre Co-Founder, and CEO. "The acquisition strengthens our leadership positions and expands us both globally and into important growth areas. Massive is a brilliant company and a fine addition for Deltatre."

Massive's UX management console, 'AXIS', underpins sports and entertainment OTT streaming services for the BBC Worldwide, Bell Media, Channel 5, Telecine, Sony Pictures Television, DR and numerous other high-profile clients. It is a valuable addition to 'Amplify', Deltatre's OTT platform and completes the most advanced end-to-end OTT product suite for all media. Amplify is currently serving the ATP's Tennis TV, NFL Game Pass Europe, Juventus Pass, FINA TV, and several others.

According to Max Ramsay, Chief Technology Officer & Executive Vice President of Massive, "Regarding technology, it will be a game-changer for Massive to gain ready access to Diva, Deltatre's video product workflow and real-time synchronous interactive video player. We are as excited to use Diva in personalised, AXIS-driven experiences for sports, as we are to bring it to Massive's live entertainment vertical, which includes news, politics and reality TV."

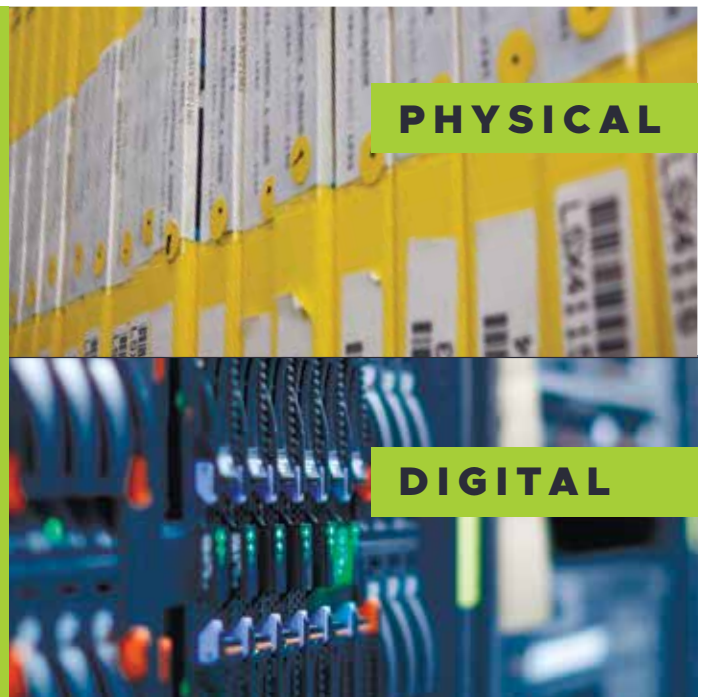
"Similarly, we are excited to integrate with Deltatre's Forge CMS. Managing sports content is no easy task, and having access to Forge to drive data within AXIS means that we are better able to bring hyper-personalised experiences rapidly to market. Without question, this is something that we feel will make a lot of existing and future clients very happy."

Gibson Dunn served as legal advisor for Deltatre and HSBC was the financial advisor. Massive's legal advisor was DLA Piper; its financial advisor is Raymond James.

Visit <https://massive.co> and [www.deltatre.com](http://www.deltatre.com)

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## Gittoes Gets Gritty with Sony 4K Cameras on 'White Light'

**AWARD-WINNING ARTIST, CINEMATOGRAPHER, FILM PRODUCER, DIRECTOR AND WRITER** Dr George Gittoes AM has been making

documentaries for over 45 years and has seen all the transitions from 16mm film to 4K. According to Gittoes, the films he shot in standard definition are now almost impossible to remarket as present-day television and cable companies want to be able to broadcast HD. This in turn became one of the contributing factors in his decision to shoot his latest film, the feature documentary *White Light*, in 4K with Sony cameras.

He explained, "Whatever cameras we use have to be of the highest quality, especially with detail and definition. For *White Light* I am using three small Sony PXW-Z90 cameras which have fixed lenses 9.3 to 111.6mm, plus Sony shotgun mics and radio mics. The footage looks wonderful and is a huge improvement on my previous work with Sony HD cameras. The compact size has enabled freedom of movement and a less attention-grabbing presence when in intimate and dangerous situations."

Gittoes has often used one of the Sony cameras as a 'dash cam' by fixing it to the dashboard of cars. This has enabled him to do interviews with drivers in a way that has influenced the style of the film.

He added, "On previous films we have used ultra-small GoPro cameras in cars and similar space-poor situations, but the GoPro footage has not matched our other material and was either noticeably different when cut into the story or had to be scrapped because it was jarringly out of place.

"The kind of budget I am able to raise in Australia is generally much smaller than the kind of finance available to competing documentaries from overseas countries like America and Scandinavia. I will often find my films in competition in festivals against other finalists where their budgets allowed much more spending on production. My way of competing is to shoot everything with two or three cameras. This enables the editor to do fast-paced cutting and always avoid jump cuts in interviews. All my docs have many more cuts than is usual and that compensates for other areas where we have to economise. That said, using two or three cameras means you have to pick the right ones at the right cost and the Sony PXW-Z90 is ideal."

Gittoes admits to being "old school" when it comes to capturing things as they happen and trying to avoid re-takes. He also relies on his long-term co-DOP Waqar Alam who has been shooting films with him for 12 years to keep up with new technology and methods, such as flying their drone camera. However, he says anyone can use the Sony PXW-Z90.

He continued, "We have a third Sony camera with us at all times which we will sometimes leave rolling unattended on a tripod or as the dash camera in our car. At other times we will give it to some friend or someone with an extra pair of hands who is involved in a particular situation and quickly show them how to use it. One of the big advantages of these small Sony PXW-Z90 cameras is

the ease with which non-camera people can successfully use them, switched to full automatic mode and get good results, without much instruction."



**Dr George Gittoes and co-DOP Waqar Alam shooting *White Light* in Chicago with Sony PXW-Z90 4K cameras.**

after winning the moment. I found myself just an arm's length in front of Pflieger, Jackson and Police Superintendent Eddie Johnson as they locked arms and created history. A tingle went up my spine as I realised I had Jessie Jackson in my viewfinder and I was thrilled to know we had successfully shot the most climactic event in our film with perfect timing and coordination. With our small Sony 4K cameras we had managed to shoot something as big as any sequence in a Hollywood blockbuster and have production values any director would envy."

According to Gittoes the size, flexibility and functionality of his Sony cameras were all key in creating the look and feel he wanted on *White Light* as he explained, "Having small unobtrusive cameras without lights or tripods allowed us to sink into the spaces like into a comfortable sofa and be unthreatening recorders of the stories and raps which come forth. I think the scenes I like the most in *White Light* are all in low light with a ghostly, smokey atmosphere. I cannot praise the PXW-Z90 cameras more highly for the way they captured these dark and moody interiors."

Like any good cinematographer, the choice of equipment and cameras comes down to many things but at the end of the day it's the results you get from them that count above all else.

George Gittoes concluded, "It was a big decision to purchase these Sony 4K cameras instead of going for larger models with interchangeable lenses as there was the chance the overall film quality could suffer but Waqar and I are delighted that by using these PXW-Z90s we have achieved such a great product in *White Light*. We are very much looking forward to sharing this amazing result and piece of work with cinema and smaller screen audiences worldwide."

Visit [www.sony.com.au](http://www.sony.com.au) or for New Zealand visit [www.sony.co.nz](http://www.sony.co.nz)

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HXR-NX80: Connect this product to a HDR compatible Sony TV via a USB cable when displaying HDR movies.

For more information, please visit  
[pro.sony](http://pro.sony)

Beyond Definition

## ARRI Puts Cinematographers in Control

**AS PART OF ITS ON-GOING EFFORTS** to help speed up configuration changes on set, ARRI is extending its range of Compact Bridge Plates for AMIRA and ALEXA Mini cameras. The Compact Bridge Plate CBP-2 for ALEXA Mini is readily adaptable for use with 15mm studio rods. The CBP-3 (19mm) and CBP-4 (15mm studio) are for use with AMIRAs. These new bridge plates are in addition to the CBP-1 (for ALEXA Mini with 19mm rods).

This range of Compact Bridge Plates are ergonomically designed to be comfortable on the shoulder, sturdy on the dolly, and establish new standards in versatility, with a unique top-mount system which allows the bridge plate to be swiftly attached to industry-standard balance plates. A key feature is a revolutionary double pressure mechanism which allows the camera to be simply lifted off a tripod.

Lightweight 15mm rods can be used natively on the AMIRA Compact Bridge Plates (CBP-3 and CBP-4) and they can be used with the ALEXA Mini Compact Bridge Plates (CBP-1 and CBP-2) using an adapter (15mm LWS adapter for CBP).

Also new is ARRI's Operator Control Unit OCU-1, an addition to the WCU-4 lens control system on ALEXA Mini which enables operators to over-ride and return focus, zoom, and iris controls at the touch of a button.

The OCU-1 will help save time while framing shots, as the camera operator will always have the ability to control the lens, even when motors are attached. It allows control of focus, iris, and zoom whenever required for practical or creative reasons. The device enables control of EF lenses mounted on ALEXA Mini and AMIRA cameras without any additional external motors.

The OCU-1 is small, lightweight, and easy to use. It has the same control



wheel, display and LBUS integration as the ARRI Master Grips, and can be easily mounted onto common 15mm or 19mm rods, ARRI Rosette, or 3/8-inch mounts. The wheel can also be used to control the roll axis of the ARRI Stabilized Remote Head SRH-3.

Meanwhile, ARRI's Digital Remote Wheels DRW-1 is an additional controller for use with its Stabilized Remote Head SRH-3. The DRW-1 combines digital technology with components inspired by earlier generations of the ARRIHEAD. The heavy, hand polished, precision-engineered crank wheels are the same as were used on the mechanical

ARRIHEAD. Bringing a mechanical touch and feel to a digital workflow, they provide operators with maximum control by producing a smooth, linear information stream, and enabling operators to trust their muscle memory.

Mechanical friction can be added in order to make the controls less prone to unintended movement, but more responsive to the individual. The brake lever also pays homage to its counterpart on the ARRIHEAD, mimicking the operation of its mechanical forebear and allowing for optimal, intuitive control.

The DRW-1's assignable controls and interchangeable components make it readily adaptable to the working style and habits of the operator. The angle of the wheels is adjustable to allow for use even in tight or constrained places. An additional third wheel can be quickly added to the system. Screw holes of different sizes allow for easy attachment of a wide range of accessories. The DRW-1 can also be mounted on any tripod or stand.

Using the LBUS standard, the wheels are daisy-chainable, and so require a minimum of cabling, and as LBUS cables are widely available they are easily replaceable.

Visit [www.arri.com](http://www.arri.com)

## 8K x 6K Large Format Digital Cinema Camera

**ACHTTEL PTY LIMITED HAS ANNOUNCED** what it says is the industry's first 8K, 48 Megapixel, 4:3 aspect ratio, large format digital cinema camera system. The system is specifically designed for IMAX and Giant Screen Cinema productions striving to achieve the highest image quality and immersive experience.

The technology offers recording data rates of 2GB/s – about 6 times higher than 8K cameras currently available, uncompressed RAW format, Wide Colour Gamut, and large Full Frame (36.4 x 27.6 mm) sensor delivering the highest image quality traditionally attributed to IMAX and Giant Screen films.

The camera's small size allows for different stereoscopic 3D configurations, aerial filming and integration with underwater systems that use submersible lenses to achieve the image quality never before experienced on Giant Screen and IMAX Cinemas.

"We are very excited to bring a digital camera system specifically tailored for Giant Screen needs offering 8K resolution and native 4:3 aspect ratio and image quality far exceeding that of available cameras. This innovation is set to achieve the high ground that Giant Screen films held over main-stream cinema that keeps audiences coming back," said Mr Pawel Ahtel ACS, the director of the company.

The new camera will be available for productions in first quarter 2019. For advanced bookings and enquiries contact Pawel Ahtel, ACS at [pawel.achtel@24x7.com.au](mailto:pawel.achtel@24x7.com.au) or phone: +61-40 747 2747.

## Sony 4K NXCAM Camcorder

**SONY'S HXR-NX200 TARGETS** professional videographers and content creators and is capable of delivering 4K images using a newly refined colour science.

The HXR-NX200 is capable of capturing 4K high resolution images, in addition to its HD capabilities. This is possible with Sony's 1.0-type Exmor R CMOS image sensor with effective 14.2 megapixel that achieves high sensitivity and delivers superb image quality in 4K. Further, thanks to the large high-resolution sensor, superior image quality when shooting in HD is also available. In addition, the latest NXCAM camcorder offers users the flexibility to shoot in 4K and cut out in HD during post production.

The HXR-NX200 is equipped with a 29mm wide-angle G Lens with three independent manual lens rings, enabling manual control of focus, zoom and iris, for quick and precise adjustment.

A 12x optical zoom is enhanced with Sony's unique By Pixel Super Resolution Technology, Clear Image Zoom, at 24x in HD and 18x in 4K. With the built-in 4 Step ND Filters, the HXR-NX200 is able to adjust quickly to capture quality content in a multitude of environments, producing sharp, clear images without losing the detail.

Extending the recording format of Sony's NXCAM family, the HXR-NX200 is capable of recording 4K XAVC S 100Mbps for superb picture quality with less noise due to higher bitrate. Further, the latest camcorder features dual media slots, enabling extended recording time and workflow flexibility through relay and simultaneous back-up recording.

Visit <http://pro.sony-asia.com/broadcast>





## Atomos Ninja V

**ATOMOS' NINJA V 4K HDR** monitor/recorder is now shipping. The five-inch 4kp60 HDR monitor recorder comes at a time when several new mirrorless cameras with 4k 10-bit HDMI output and Log gammas have been launched that partner perfectly with the Ninja V.

The new Canon EOS R, Nikon Z6 and Z7 and Fujifilm X-T3 now join the Panasonic GH5 and GH5S in taking full advantage of the Ninja V 4k 10-bit 422 recording to Apple ProRes or Avid DNxHR.

Modularity is at the heart of the Ninja V with a bi-directional high-speed expansion port breaking out connectivity for I/O of video, audio and power. Atomos created AtomX to ensure users could adapt and connect to any legacy or future wireless or wired video standard. The expansion system offers scalability and is demonstrated by the first of many modules – the AtomX Ethernet/NDI and the AtomX Sync. These dock into the AtomX port and instantly add features like NDI over ethernet and Wireless Sync and Bluetooth control to the Ninja V.

The AtomX Ethernet/NDI module has a wired ethernet (1 GbE) connector that makes it possible to deliver live broadcast-grade video over IP networks. The module has NDI input and output with encode, decode, control and sync, allowing Ninja V users to transmit, distribute or receive and monitor NDI from any NDI source.

The AtomX Sync module, meanwhile, brings professional wireless timecode, genlock and Bluetooth control to Ninja V, suitable for enhancing DSLRs, mirrorless cameras or game recordings. Users can sync and/or control literally thousands of Ninja V units equipped with AtomX Sync modules on the same network at ranges of up to 300m. Allowing multi-cam shoots, AtomX modules bring broadcast level standards to any HDMI camera or source, making it easy to integrate large sensor consumer cameras easily into traditional live productions. AtomX Sync has a built-in battery extender that allows for continuous power when swapping batteries, ensuring uninterrupted operation of the Ninja V during a shoot.

To coincide with the Ninja V release Atomos have announced a major new update to the AtomOS operating system. AtomOS 10 has been redesigned from the ground up to offer simpler operation combined with fewer distractions when monitoring a shot. Operation is quick and intuitive, with extensive use of swipe commands. Redesigned icons have an emphasis on easier HDR production enhancing the creative process. The waveform monitor and audio level meters are clearer than ever.

The near edge-to-edge high bright five-inch screen has a stunning 1000nits of output coupled with an anti-reflection finish – allowing users to clearly see their images even in daylight. Use the colour-accurate display with AtomHDR to see in High Dynamic Range, or load creative LUTs at the touch of a button. Ninja V gives you all the critical monitoring tools you need in SDR – Rec709 or HDR – HLG or PQ. False colour, peaking, movable 1-1 and 2-1 pixel magnification, waveform, RGB parade, vectorscope, eight channel audio level meters and more are all available in AtomOS 10.

The AtomHDR engine ensures simple and perfect exposures when shooting HDR every time. It delivers a stunning 10+ stops of dynamic range to the LCD in real time from Log/PQ/HLG camera signals. Playout Log as PQ or HLG to a larger HDR-compatible screen. The Ninja V display can be calibrated to maintain perfect colour and brightness accuracy over time.

Visit [www.atomos.com](http://www.atomos.com)

## New Blackmagic RAW Codec

**AT IBC2018, BLACKMAGIC DESIGN** announced the public beta of Blackmagic RAW, which the company describes as a “modern codec that combines the quality and benefits of RAW with the ease of use, speed and file sizes of traditional video formats”.

Blackmagic RAW is a next generation hybrid codec that features multiple new technologies such as an advanced de-mosaic algorithm, extensive metadata support, highly optimised GPU and CPU accelerated processing and more. It can be used from acquisition throughout post-production for editing and colour grading, all from a single file.

Traditional RAW codecs have large file sizes and are processor intensive. Video file formats are faster, but suffer quality problems due to the use of 4:2:2 video filters that reduce colour resolution. Blackmagic RAW solves these problems by moving part of the de-mosaic process into the camera where it can be hardware accelerated by the camera itself. Because the processor intensive partial de-mosaic is done by the camera hardware, post-production software such as DaVinci Resolve doesn't have to do as much work decoding the files. In addition, GPU and CPU acceleration make decoding of frames faster, enabling smooth performance for editing and grading.

Blackmagic RAW is much more than a simple RAW container format. Image data, along with the unique characteristics of the image sensor, are encoded and saved into the Blackmagic RAW file, giving customers much better image quality, even at higher compression settings, as well as total control over features such as ISO, white balance, exposure, contrast, saturation, and more.

Blackmagic RAW also uses Blackmagic Design Generation 4 Color Science for high-quality imaging that results in reproducing accurate skin tones and lifelike colours. Images are encoded using a custom non-linear 12-bit space designed to provide the maximum amount of colour data and dynamic range.

A free developer SDK lets any third-party software application add Blackmagic RAW support on Mac, Windows and Linux. The Blackmagic RAW developer SDK automatically handles the embedded sensor profile metadata, along with Blackmagic Design colour science, for predictable and accurate image rendering that yields consistent colour throughout the entire pipeline.

Blackmagic RAW features two types of file compression. Customers can choose either constant quality or constant bitrate encoding options, depending on the kind of work they are doing. This lets them prioritise image quality or file size.

Constant quality uses variable bitrate encoding so complex frames are encoded at higher data rates to preserve detail and maintain the highest possible quality. Blackmagic RAW Q0 has minimum quantisation and yields the highest quality, while Blackmagic RAW Q5 uses moderate quantisation for more efficient encoding and a smaller file size. Blackmagic RAW 3:1, 5:1, 8:1 and 12:1 use constant bitrate encoding to give customers the best possible images with predictable and consistent file sizes. The ratios are based on the unprocessed file size of a single frame from the camera's sensor, making it easy to understand the relative amount of compression being used.

Visit [www.blackmagicdesign.com](http://www.blackmagicdesign.com)



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## Bathurst 1000 Creates History in 4K

**WHETHER YOU SUPPORT HOLDEN OR FORD**, 2018's Supercheap Auto Bathurst 1000 for Supercars was history-making, not only because it was Craig Lowndes' 7th victory and final appearance, but it was also the first time an Australian sporting event was televised live in 4K.

Shown ad-free on Foxtel's new 4K channel, 444, the 4K production was captured and delivered by Gearhouse Broadcast. This included providing all the facilities, equipment and outside broadcast trucks onsite at the Mount Panorama Circuit.

Twenty-six Sony HDC-4300 4K/HD system cameras and one Sony HDC-P43 point-of-view camera were deployed around the track, while Sony's HDC-4800 slow motion camera was used at the event to capture the action in even greater detail. This brought a total of 28 native 4K broadcast cameras. An additional 56 HD sources (specialty track cameras, pit cameras, Heli, CamCat – hi speed rail cam system – and all the traditional EVS output channels) were also used. These were up-scaled to 4K, bringing to 83 the total number of sources available to the 4K Director.

A combination of 4K FUJINON UA80, UA107, UA22, UA24 and UA13 box lenses, 22x standard lenses and wide lenses were used during the broadcast.

According to Gearhouse's Asset Manager, Ben Quelch, "The FUJINON UA80 was used on a Sony HDC-4800 camera at the top of the mountain. The reason for this is that this lens with this camera provides the best quality when converting from the 4800 PL mount the lens B4 mount. Also, it's fair to say this camera and lens combination produced stunning slow-motion images."

Supercars Media's Nathan Prendergast, said, "The arrangement for FUJINON to supply the glass was a collaborative effort between Gearhouse Broadcast and Supercars to ensure we had the best possible image quality. The huge variety of shots required to deliver the broadcast from 28 native 4K cameras meant we needed a variety of lenses options and FUJINON delivered. From the long range 107 to the wide angle on the job in the Hino Hub, FUJINON had a solution that worked for the broadcast. Even in the inclement weather of the first two days of broadcast we had no problems with the FUJINON lens range and they performed beautifully."

The Main Program output was also enhanced with native 4K graphics and a native creation of 5.1 surround sound to accompany the brilliant and dynamic images.

"Gearhouse Broadcast was the natural choice for delivering a large-scale event like Supercheap Auto Bathurst 1000 in 4K for the first time," added Nathan Prendergast. "The team at Gearhouse Broadcast has provided Supercars with excellent broadcast coverage for the past five years, so we had total confidence that they would deliver the latest, cutting edge content to enhance our broadcast even further."

John Newton, CEO, Gravity Media commented, "We are thrilled to help deliver an event of such scale live in 4K. In the last few years, Gearhouse has invested heavily in the latest 4K production equipment and has been involved



Fujinon lenses in action at the 2018 Bathurst 1000.



Delivering the 4K action, Grass Valley's Kahuna 9600 Production Switcher.

in numerous live 4K productions around the world. This has been the next evolution in the ongoing efforts by Gearhouse to consistently move forward with innovations, integration of new technology and a collaborative relationship with Supercars that goes back to when we first partnered in 2013."

### GRASS VALLEY DELIVERY

The six-hour, 1000km race was televised with routing and monitoring completed via FOX SPORTS Australia. Grass Valley solutions formed the heart of the live IP production infrastructure both at the venue and FOX SPORTS Australia's facility – which included a Kahuna 9600 Production Switcher and NVISION Compact Router. Grass Valley was chosen for its proven ability to support the ultra-fast live production turnaround needs and to seamlessly integrate with Foxtel's own playout workflow, also built around Grass Valley systems.

"Motorsport is all about speed, and with no advertising breaks, everything had to run without a hitch from start to finish," said Ben Madgwick, Manager of Broadcast Services with Gearhouse Broadcast. "What we needed was an OB infrastructure and workflow that could seamlessly handle the sheer volume of 4K UHD signals, deliver flawless images to viewers at home, and ensure a smooth flow of files between the OB truck, FOX SPORTS Australia and Foxtel. We know from experience that Grass Valley delivers unmatched flexibility and has a proven track record in handling the huge pressures that arise

with live productions in fast-paced environments like motor racing. We are very proud to have partnered with Grass Valley once again to help make Australian broadcasting history."

Grass Valley's solutions were also central to the seamless orchestration and delivery of the race's live feeds. Signals that were sent to FOX Sports Australia were switched and monitored through a Sirius 800 Series Router with MV-800 Multiviewer before being sent to Foxtel for final switching and transmission. FOX SPORTS control room features a complete 4K UHD live channel playout system with Grass Valley's Masterpiece Master Control Switcher, controlled by its scalable Morpheus Automation Solution. Channel playout was supported by Grass Valley's ITX Integrated Playout Platform, GV Node Real Time Processing and Edge Routing Platform and Kaleido-X Multiviewers for monitoring of the satellite uplink feed.

"Sports fans around the globe demand the best fan experience possible, placing broadcasters and media organizations under pressure to deliver a richer viewing experience from more camera angles, in the highest resolution possible," said Ward Hansford, vice president of sales, Oceania, Grass Valley. "As the leader in live sports production, we deliver solutions that can handle even the most challenging production requirements, with no compromise on image quality. It is an honour to see our solutions form the core of another landmark event in broadcasting history."

Visit [www.fujifilm.com.au](http://www.fujifilm.com.au) [www.grassvalley.com](http://www.grassvalley.com) and [www.gearhousebroadcast.com](http://www.gearhousebroadcast.com)



## Brightside Live, TRP Cut the Cord with Techtel

**BROADCAST SYSTEMS INTEGRATOR TECHTEL** has deployed a robust wireless broadcast system from AbonAir for Western Australian live production company Brightside Live. This comes as Brightside Live continues to expand into larger arenas and more complex projects requiring longer wireless range and uncompromised stability and robustness of a wireless system in a live environment.

With Brightside's over 200 live production projects per year and almost 30 years' experience, organisations with broadcasting needs such as Perth Wildcats, Western Force, West Coast Fever, Chevron, BHP and Bankwest rely on the company to deliver critical events – be it production for a nightly live stadium sporting event or regular real-time streaming services for corporate stakeholders. As their projects expanded into more complex events and larger arenas, Brightside Live required a new robust wireless broadcast camera system with a larger area coverage, more reliable transmission and minimal latency.

Techtel supplied, and tested ABonAir's Wireless Broadcast system, consisting of a transmitter, receiver and an antenna system based on Multiple Input Multiple Output (MIMO) design to enhance performance and ensure coverage even in extreme radio signal environments. The ABonAir AB507 enables video transmission of up to 1000 metres, making it suitable for use at any stadium in Australia, and has a delay of 7 milliseconds between shooting the content from Brightside's roving camera and having it available at their control room ready for broadcasting.

David Salt, Managing Director at Brightside Live said, "Our customers want a high-quality, broadcast-like experience for their streaming live viewers. Second to human expertise is the technology that drives this experience,

and it is the wireless broadcast camera system provided to us by Techtel that enables us to deliver a robust and reliable service for an event of any scale, shape or size."

The Brightside Live deployment follows roll-out of an AbonAir wireless broadcast system for Thoroughbred Racing Productions (TRP), the live production company of choice for Thoroughbred Racing South Australia (TRSA).

Producing over 3500 hours of High Definition live thoroughbred racing outside broadcasts each year, and covering 535 meetings per year with up to seven meetings in one day, TRP is Australia's largest live production company in Thoroughbred broadcasting. Earlier this year, TRP won a tender to become TRSA's live production partner of choice for all of their outdoor racing events. As a part of this multi-year contract, TRP will be supplying two of their Outside Broadcasting (OB) trucks.

Techtel supplied and tested ABonAir's Wireless Broadcast system, consisting of a transmitter, receiver and a fibre coverage extender, which enables the system to connect multiple receive sites via fiber cables exponentially increasing wireless coverage.

Charles Cole, Engineering and Technical Operations Manager at TRP, said, "We were very honoured when TRSA chose us for this project, given the nature and scale of their events. We immediately turned to Techtel as our long-term partner in broadcast systems, knowing their expertise with major live events and their ability to provide end-to-end integration of any technology. We needed to deliver a reliable, predictable high end service, which could be rapidly integrated at the race tracks with the camera for full control, and were delighted to have exceeded these expectations."





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# CONGRATULATIONS!

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## The P.A. People Score with BOSE for Sydney Kings

AFTER ALMOST 25 YEARS SYDNEY'S THE P.A. PEOPLE has returned to their rental roots, purchasing a Bose ShowMatch Delta-Q array loudspeaker system for its Event Communications department.

"We have been looking for the right opportunity and the right product for quite some time – I first heard the ShowMatch system two and a half years ago before its release and I was impressed," said Chris Dodds managing director of The P.A. People. "Since then there has been critical acclaim at the product launch in Australia and some great reviews of the product in use. We felt that the form factor was appropriate – and the tonality of the system suited most client's needs, and for a small system it does get loud without losing control.

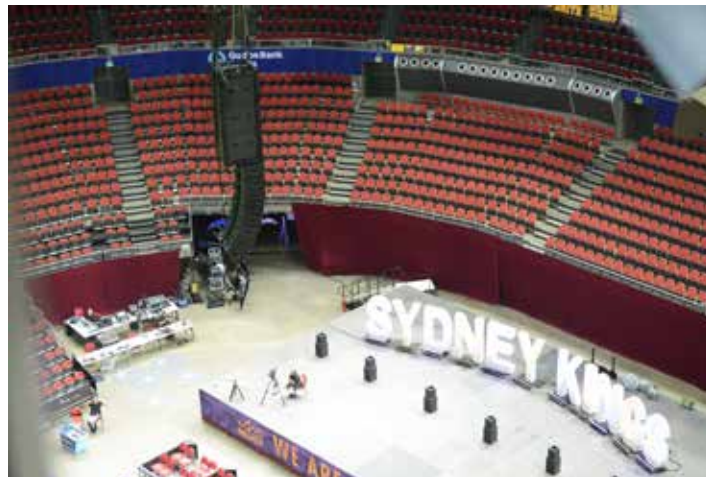
"We were asked if we would like to bid for the provision of Audio and Comms supporting the Sydney Kings home games at Qudos Bank Arena, and it seemed like a great opportunity to invest in a speaker system to support our communications system offer," Dodds continued.

The ShowMatch system combines the best of both traditional line array design with the benefits of a constant curvature system in the near field.

"We rigged the system for the first time on the Monday and then spent a couple of days rehearsing with the system. The rig for the Kings in Qudos Bank Arena consists of six arrays, each comprising eight ShowMatch cabinets and a cardioid bass array of three 18" SMS118 subcabinets. Each pair of main arrays uses a different combination of SM5 (5 degree), SM10 (10 degree) and SM20 (20 degree) cabinets to achieve the appropriate vertical dispersion."

Waveguides are available to tailor the horizontal dispersion from 55 to 120 degrees.

"We have then selected 100-degree waveguides for the SM5 and SM10 cabs, and 120-degree guides for the SM20's. That way we are able to match the dispersion of each cluster to the requirements of the venue in both vertical and horizontal planes," commented Anatole Day, system engineer for the initial arena install. "We also added four SM20 cabs on the lower ring of the gondola to help bring the image down closer to the action for the court side ticket holders.



"The P.A. People opted for an entirely Dante based signal distribution system for the Kings. The system is in and out of the Arena on a regular basis so being able to connect a single cable for signal distribution is great. The system is based on a Yamaha QL console and a pair of RIO1608 boxes to collect and distribute the audio from the system engineering location, the video replay systems, the OB trucks, and the PA itself."

The system for the Sydney Kings is rounded out with a comprehensive Clear-Com Communications system centred around a Delta matrix frame, V-Station matrix panels, Helixnet digital partyline belt-pacs and an integrated FreeSpeak II wireless solution.

"The Comms system is fantastic," said Matt Byles, Technical Director for Great Big Events. "Having the FreeSpeak system fully integrated with the Matrix panels and the partyline provides us with a level of functionality we haven't achieved before at the Kings, and the wireless coverage is fantastic."

Visit [www.papeople.com.au](http://www.papeople.com.au)

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## NZ Racing Gallops Towards HD

**KIWI PUNTERS WILL SOON BE ABLE** to see every muscle twitch as the New Zealand Racing Board (NZRB) introduces High Definition (HD) for all New Zealand racing, a move that will significantly enhance the viewing experience for customers.

"In 2017 we changed the way we capture greyhound racing in New Zealand, which also brought a move to HD. Our customers absolutely love it," said Andy Kydd, NZRB's General Manager of Media and Content.

The switch is thanks to the replacement of NZRB's outside broadcast (OB) vehicles to new trucks supplied by Sony.

"We're currently the largest OB service provider in the country, but our equipment was over 15 years old. The risk of losing vision, even briefly, would have such a negative impact for our customers and for the racing industry, we had no option other than to upgrade the fleet," says Kydd.

"Through the use of more modern technology, we've been able to reduce the size of the fleet and right-size our broadcasting operation, this allows us to reduce costs and deliver more profit back to the racing industry," said Kydd.

The new OB vehicles will cover all thoroughbred and harness race meetings throughout New Zealand, with each truck based in one of four main regions – Northern, Central and Southern (Christchurch and Dunedin).

The top half of the South Island was first cab off the rank with a successful launch at Addington Raceway on September 14.

All race meetings in this region will be transitioned from the current standard definition truck to the new high definition truck over the next six months, with NZ Cup and Show Week in November the first major carnival to be filmed and broadcast in full HD.

The move to HD for equine racing in New Zealand will be gradual, in line with the roll out of each new OB vehicle. NZRB expects the roll out to be complete by the end of 2019.

Visit <https://nzzracingboard.co.nz>

## Sky Racing Expands with ATEME, Amber

**ATEME HAS ANNOUNCED THAT AUSTRALIA'S SKY RACING** has successfully deployed its video compression solutions facilitating a complete HD refresh and expansion of DTH services.

ATEME worked with its ANZ distributor Amber Technology to design and deploy the Sky Racing system utilising the company's Kyrion encoders. This enabled Sky Racing to take advantage of increased video-quality contribution of video content to and from horse racing venues to its production facilities at ultra-low latency. In addition, Sky Racing has also opted for an MPEG-2, H.264 headend for its DTH distribution services. Utilising ATEME's software-based TITAN Live solution, Sky Racing now distributes SD and HD video statistically multiplexed, and generate all profiles and protocols required for delivery in primary and redundant services.

"Racing and sports content are of the most difficult to compress, especially when you need to preserve the picture quality while minimising latency. ATEME provided us with an ideal solution for distribution of live racing, sports content including EPL & European league football and low bitrate wagering data distribution with superior video quality, with shared bandwidth to deliver highest quality at lowest cost of delivery" said Dennis Dovalé, Technology Manager (Media) at Sky Racing. "We are now equipped with best-in-class video technology, lowest latency in market and unparalleled on-the-ground support," he added.

"There is no better facility to push our equipment to its limits due to its diverse workflows and focus on latency reduction. The successful deployment of the TITAN and Kyrion solutions at Sky Racing are testament to the quality our solutions and the dedication of our Australian engineering team," said Will Munkara-Kerr, Australian Country Manager for ATEME.

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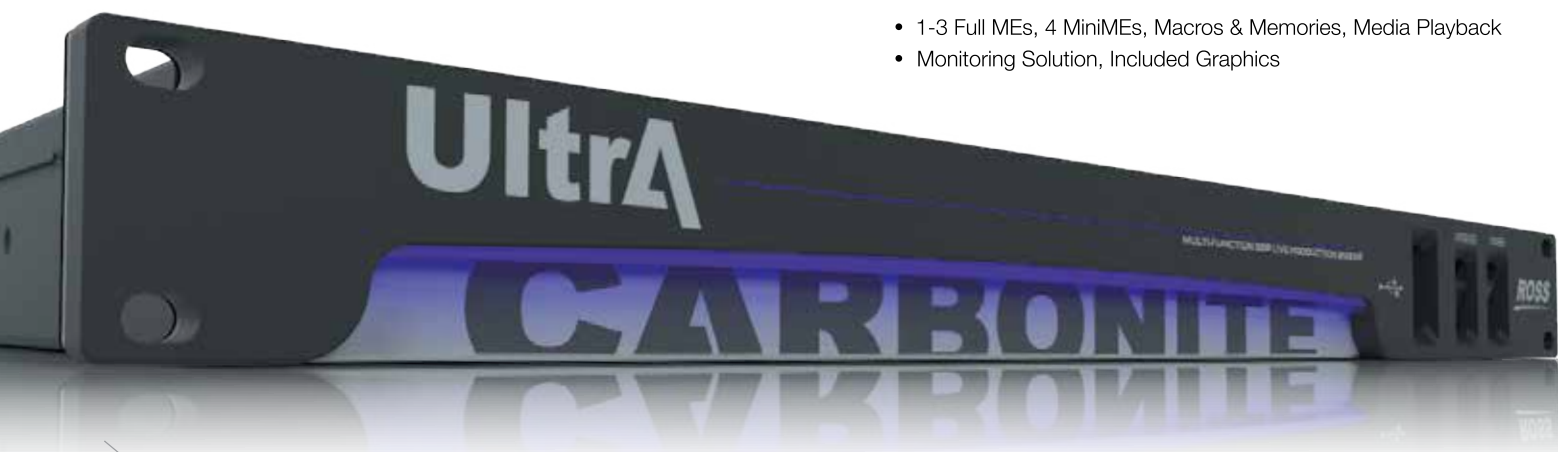


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## Kicking Goals with Augmented Reality and Remote Production

### MORE REMOTE PRODUCTION. MORE AUGMENTED REALITY. MORE ESPORTS.

That's the word from Ross Munro, Head of Sports in Asia with Vizrt, the developer of real-time 3D graphics, studio automation, sports analysis and asset management tools for the media and entertainment industry.

Describing the growth of eSports as "crazy", Munro says, "I've been with Vizrt for two years and the revenue has gone up. It's just the money that's being invested into there – both the linear coverage and the digital coverage – is just astronomical."

One of the challenges, says Munro, is that many of the production staff that come from eSport companies don't necessarily have a broadcast background. Despite this, Vizrt recently signed a major deal with South Korea's Riot Games.

"The home of eSports in Asia is South Korea," he says. "You think about soccer in the UK. South Korea is where eSports nucleus is. It's the tech culture. Definitely conducive to eSports."

When it comes to sportscasting technology, much of the hype in recent years has centred around augmented reality (AR), particularly at the 2018 FIFA World Cup.

"We actually release a lot of our cutting-edge feature with the World Cup in mind," says Ross Munro. "We're always doing bulk fixes and trying to improve the bedrock of all of our software, but in terms of real eye-catching 'X factor' features, we will release them around the World Cup because the noise and the attention that the World Cup creates just gives everything a massive boost. We've got this new feature at the moment, Libero AR, so Libero Augmented Reality which is basically combining our AR with our analysis and has proved very popular. Most of our sports broadcasters have snapped it up."

"Normally, it takes a couple to get on board and then there's a bit of a snowball effect. In this case, it has been embraced almost immediately and it was a no-brainer for most people."

Another trend in evidence at this year's FIFA World Cup was that of remote production.

"We see that as the future," says the Vizrt Head of Sports in Asia. "It's huge, and we are investing the time and resources into our software to make that



more cost-effective and easier. We're trying to develop the technology which allows for better remote productions."

According to Munro, one of the challenges for remote production involving graphics and augmented reality is the traditional reliance on hardware-based tracking systems.

"If you're delivering remote production, how would you do that? It's impossible if you've got all your directors, all your operators

500 miles away," he says. "So, what we're trying to do is we're investing in a lot of time and money into the image-based products. Being able to do the tracking, just using the camera footage – you don't need any hardware. Broadcasters want augmented reality, but they don't want to have to ship and transfer manpower and hardware, tracking devices on site."

"They want to do it all remotely, and that's only possible if you're working off a software-based solution, which is what we're invested in. We do it already. We do a version of that already. The tracking and the keying is not as stable and as robust as the mechanical tracking. Image-based is, I would say, 80% of what mechanical can do."

"But, we've still got a number of customers using it. Channel 9 (Australia) use it, Tencent (China) are starting to use it, RTM (Malaysia) use it. We've got a number of customers, but I think we're going to see a real explosion in that area."

And, as sportscasters throughout the region adopt such cutting-edge technology, they also become part of the feedback loop for improvements and new products.

"I'm the middle man, or the conduit doing research and development in Zurich and our Asia broadcasters and all that involves," says Munro. "That means if the Asia broadcasters have got a fantastic idea or feature they might see incorporated into our products, I will then try to create a business case for it and then relay that to our R&D team. More often, someone gives us a good idea, I go back to our R&D and they say, 'Funny you just mentioned that because someone in America also wants to see that.' Then they develop that."

Visit [www.vizrt.com](http://www.vizrt.com)

## Singtel Group to Boost eSports Across Region

**SINGTEL, ITS WHOLLY-OWNED SUBSIDIARY, OPTUS**, and regional associates Airtel, AIS, Globe, and Telkomsel, have signed a Memorandum of Understanding to cooperate and jointly leverage their strengths to grow the gaming and esports ecosystem in Southeast Asia, Australia and India.

The MOU brings together the six members of the Singtel Group to partner across the gaming space, including scaling up esports, content creation and distribution, and collaboration with the broader gaming ecosystem. This was announced at the Singtel Group's inaugural multi-title and regional esports league, PVP Esports Championship, which took place from the 5th to the 7th of October and featured some of the biggest international names in gaming.

The Singtel Group will tap on its telco assets, strong knowledge of its local markets in Asia and mobile customer base of more than 700 million to explore opportunities to enable esports enthusiasts and gamers in their passion. As more than 200 million customers across the group play games on a regular

basis, Singtel, Optus, Airtel, AIS, Globe, and Telkomsel, intend to work together to develop solutions and services for gamers and fans in the region. This includes access to high quality local, regional, and global esports competitions, as well as original content and exclusive programming.

The number of gamers in the region is projected to surge from 400 million in 2017 to more than 700 million by 2021, with esports viewership numbers expected to double and reach over 40 million by 2019.

Singtel is the organiser and owner of the PVP Esports Championship and the content related to this event, which enables Singtel to distribute the event content globally. The event attracted over 3,600 teams competing in both Dota 2 and Arena of Valor for a US\$300,000 prize pool, and was broadcast in seven languages – English, Bahasa Indonesia, Chinese, Korean, Russian, Tagalog and Thai.

Visit [www.singtel.com](http://www.singtel.com)



## Talking Politics and Sport with Vizrt

**SPORT AND POLITICS.** Sometimes it's hard to pick which is more important to society, but one thing is certain – they both make for great television.

The next two years will see plenty of both across the Asia-Pacific with national elections scheduled for Afghanistan, Australia, India, Indonesia, and the Philippines in 2019. Sports fans, meanwhile, will be treated to the Asian Football Cup, Australian Open Tennis, Special Olympics, the Arafura Games, the Pacific Games, World Aquatics Championships, Rugby World Cup, and the South-East Asian Games, among others. Then, in 2020, it's the big one – the Tokyo Olympics.

All of which will no doubt keep graphics vendors busy as they strive to innovate and meet client requests for even more leading-edge capabilities.

According to Manish Aggarwal, Managing Director of VizRT India, "2019 is a big trigger year for us, it's the elections, general elections, and people have already used augmented reality, virtual reality in the past elections so that's a big driver for a new challenge to be set up as well. So, as you know, news is politically motivated, so it's a propaganda tool and we see a lot of sport in the growth of news channels as well, so that's very much on the horizon."

When it comes to sport in India, naturally the big driver is cricket which, in terms of production and broadcast, has changed radically since the introduction of the Indian Premier League (IPL).



"The whole market has just taken a 360-degree turn," says Aggarwal. "It's branding and all kinds of opportunities and other businesses have emerged because of the IPL. That's really great. And, India has now finally understood the franchise model which is so successful in the West and other markets."

"Now with IPL taking the lead, other sports like kabaddi, soccer and badminton and golf – so there are a lot of league sports that are being played, teams, ownerships, so the franchise model has really taken off. That's really good. I think

this is on the cusp of that because we have some great tools not only to help the broadcaster make a good return on their investment but also for pre-game, post-game.

"So, like, in the UK you have several channels that are showing the live game and that's the premium channels, but there are also subsidiary channels that are talking about the game without the live feed, so that kind of a market is emerging in India as well. So, enabling the broadcasters to differentiate and generate more revenue as well.

"Also, on the content production side, a lot of people want to use artificial intelligence, AR, VR, all the buzz words people are talking about, every industry's talking about them. And, from the broadcasting perspective, this is something that's inherent in the Viz suite of products."

Visit [www.vizrt.com](http://www.vizrt.com)

## Etere Powers News in Indonesia and the Philippines

**GRAPHICS, MAM AND PLAYOUT PROVIDER ETERE** has seen its systems recently installed at CNBC Indonesia and the Philippines' ABS-CBN network.

Launched in February 2018 and affiliated with CNBC International, CNBC Indonesia turned to Etere to power its automation and graphics.

Available via traditional TV and the web, CNBC Indonesia leverages the technology of Etere ETX to manage its channel automation. The system gives the news channel intuitive master control complete with touch screen features. CNBC Indonesia also leverages the Etere Media Enterprise Resource Planning (MERP) framework to power its automation and playout. Etere MERP is capable of connecting and integrating all data in a company workflow, including internal and external information across distributed departments. The result is an integrated workflow with updates in real-time, enabling CNBC to leverage the benefits of faster content delivery which, in turn, allows it to respond and adapt quickly to market demands.

CNBC Indonesia also uses Etere software to insert tickers showing breaking news and financial market updates. Information is delivered seamlessly across every step of the workflow even when the involvement of multiple departments and stakeholders is needed. The platform manages rights management, graphics insertion and approvals with a single interface.

Etere ETX is a channel-in-a-box system designed for video management and playout. It features full IP in and out capabilities as well as support for multiple frame rates, and comes equipped with an ingest and playout engine that produces professional 4K video quality. Additionally, it supports all major essences and wrappers in the broadcast industry and is capable of a fully compliant DVB (Digital Video Broadcasting) stream as well as multiple layers of 3D and 2D graphics.

Etere ETX Master Control, meanwhile, enhances the video and graphics capabilities of CNBC Indonesia's IT-based playout. It features a digital screen with touch-screen capabilities, customised transition effects, tickers and

crawlers, preset and preview bars for fast switching, unlimited number of input channels, crawl, CG effects, video switching including transitions effects as well as support for multiple PC installations.

Meanwhile, one of the Philippines' leading media companies, ABS-CBN, has implemented Etere's Closed Caption Software.

Etere Subtitling and Closed Caption Software provides a fully digital platform for the creation, management, burning, playout and conversion of subtitles, including live captions, open captions and closed captions. It gives the ability to edit captions even seconds before going on-air. Real-time preview capabilities allow more than 300 ABS-CBN employees to preview captions in real-time at any stage of the workflow. The integration of Etere ETX time delay allows a delayed playback to be configured according to the dynamic requirements of the program while ensuring a reliable performance at the same time with subtitles that are always in sync with the video. Not only that, operators are able to manage voice-to-text commands, real-time streaming as well as process voice commands and transcriptions in multiple languages from call centres. It is also able to process pre-recorded audio using Google's machine learning technology.

ABS-CBN is also equipped with newsroom integration that supports Google speech-to-text technology for real-time captioning. Etere Subtitling and Closed Caption Software supports up to 120 languages and variants with its Google Cloud Speech-to-Text integration which allows operators to convert audio to closed caption text instantly, supporting live broadcast to an international audience. With Etere, a single but highly redundant Etere Closed Captions inserter is able to deliver to both analogue and digital broadcasting platforms.

Etere supports a wide range of formats including DVB and ARIB subtitling, CEA 608 and 708 closed captioning.

Visit [www.etere.com](http://www.etere.com)



## Parrot Turns any Mobile Phone into a Teleprompter

**PADCASTER'S PARROT TELEPROMPTER** turns a standard smartphone into a fully functional, compact and affordable prompting system for nearly any DSLR, video camera, smartphone or iPad. Parrot allows the talent to speak naturally while looking into the lens and interacting directly with the audience.

With the rise of mobile production, more shoots are produced by minimal crews or even one person alone. Conventional prompting systems are often out of the question due to size, weight, and cost.

Padcaster's solution provides interviewers and talent alike with an easy-to-read script in a simple, lightweight, affordable package that uses any smartphone. Versatile Parrot mounts to most DSLR and video cameras, as well as the Padcaster system for iPads and Verse for mobile phones.

Parrot mounts on the lens barrel of the shooting camera in a matter of seconds. This positions a half-silvered mirror at a 45° angle so the camera shoots through it, while a mobile phone with a free app for the script is mounted below. The talent looks into the lens to read the script text reflected in the mirror.

Included with the Parrot kit is a range of popular size lens adapters (49mm-82mm) that thread onto the camera's lens barrel. The teleprompter assembly, complete with mirror, slides over the selected adapter to lock it in front of the lens. A spring-loaded phone clasp secures virtually any model smartphone below the mirror.



Parrot's wireless remote controls scrolling speed, pause, and fast forward/reverse throughout the text. The Parrot app, (available free at the Apple App Store or Google Play Store) provides for adjusting text size and width.

The Parrot Teleprompter is made of rugged components to withstand even the most challenging environment. Its high-end mirror is easy to read text from, while ensuring that the video remains crystal clear.

Visit <https://padcaster.com>

## Octopus Newsroom Partners with STRYME

**OCTOPUS NEWSROOM RECENTLY ANNOUNCED** a partnership agreement with Vienna based STRYME, which produces broadcast ingest solutions for the global broadcast market. The agreement centres on the integration of STRYME's GENESIX VideoServer V9 and the Octopus NRCS via the industry standard MOS software protocol.

"STRYME has gained an excellent reputation for the security, versatility and compactness of its server systems," commented Octopus Newsroom CEO, Petr Stokuč. "As a result of this cooperation between the two companies, Octopus operators will gain the ability to control the STRYME's GENESIX VideoServer V9 directly from the newsroom system, allowing fast and efficient ingest from every content source they are likely to encounter. In practical terms that includes SDI, IP, compressed video, cellular feeds from mobile devices, and the rising tide of social media."

MOS is an evolving protocol for communications between newsroom computer systems and devices such as video servers, audio servers, still stores, and character generators. It is supported and developed through cooperative collaboration between equipment vendors, software producers and broadcasters.

Visit [www.octopus-news.com](http://www.octopus-news.com) and [www.stryme.com](http://www.stryme.com)

## Ross Video Introduces XPression 8.5

**THE XPRESSION TEAM AT ROSS VIDEO** are pleased to announce that XPression Version 8.5 has ever released. An evolution in XPression, Version 8.5 continues to deliver an intuitive and cost-effective product used in workflows from simple character generator tasks, all the way up to complex virtual environments to a whole new set of customers.

New features of XPression version 8.5 include a global search engine within the active XPression project, NLE plug-in support for Adobe Premiere Pro for Windows, an HTML5 version of the XPression MOS plug-in, enhancements to XPression's DataLinq tools, including new additional data source types, ADODB Source file browsing, DataLinq source sorting, and new filtering tools for Dashboard DataLinq sources. Ross Video will also be demoing XPression render engines in a 64-bit edition, which extends XPression's cache management, allowing for even larger XPression projects. As part of the 64-bit edition of XPression, users will also find support for importing Cinema4D models and scenes.

Ross Video is also extending the capability of Tessera, XPression's multi-engine synchronisation option. Expanding on the existing toolset of Tessera to populate large monitor arrays, Ross Video has developed the MOS tools to create and schedule in-studio multi-monitor content creation using templated workflows. This transferred the task of monitor fill from the technical team to the content creation level of the newsroom users.

Visit [www.rossvideo.com](http://www.rossvideo.com)

## QScript.app for On-Air Mobility

**AQ BROADCAST LIMITED HAS ANNOUNCED** the launch of QScript.app, a mobile version of its QScript which provides script and rundown information to on-air presenters.

Currently, on-air presenters rely on printed sheets, which have to be reprinted after every change and which are difficult to use if a presenter is standing rather than sitting at a desk. QScript.app enables them to quickly and easily view the current version of any script on a tablet instead of referring to paper.

QScript.app marks the first time aQ has produced an application designed to run natively within a web browser using standard HTML5, JavaScript and AJAX technologies. Previously its software has been intended to run primarily on a PC under Windows.

This new portable approach means that the app can run on any platform (PC, Mac, iOS, Android, Linux, etc.) and within any web-browser. The various

underlying elements (interface to newsroom system, aQ's QSIA database and aQ's native webserver) are portable and can be configured in different ways, from a completely local system using an on-site server, to a completely hosted solution which operates entirely remotely. Once opened, the rundown and script information is updated dynamically – any change in the underlying NRCS is reflected immediately within QScript.app.

The appearance of QScript.app is completely flexible too, as it uses standard .css style sheets to define the properties of each individual element. The QScript.app can be integrated with any newsroom computer system which provides a suitable gateway, e.g. via MOS or FTP. Plus, it has a direct native interface to aQ's own QNews product.

Visit [www.aq-broadcast.com](http://www.aq-broadcast.com)



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## Dejero Boosts the Bitrate for News

**DEJERO HAS INTRODUCED WHAT IT SAYS** is the most powerful version of the EnGo mobile transmitter yet. The company says the latest EnGo is designed to give a picture quality advantage to broadcasters, especially when capturing high-motion news and sports content.

The EnGo is a compact mobile transmitter that encodes high-quality video and transmits over multiple IP networks. It can be mounted on a camera or in a vehicle and worn in a backpack.

The EnGo transmitter now features increased processing power and enhanced implementation of the HEVC compression standard, along with Dejero's auto-transport and adaptive bitrate encoding technology.

The additional processing power has paved the way for a new dynamic content adaptation feature that intelligently adjusts the encoding process based on the amount of motion detected within content that is being captured. This allows broadcasters to automatically and seamlessly transition from a talking-head shot with limited motion to high-motion content without any softening of the picture or introduction of compression artefacts.

The new Dejero EnGo can encode up to 20Mb/s and now supports 1080p 50/60.

Meanwhile, Dejero has partnered with FileCatalyst to enable broadcasters to move large amounts of data quickly, securely, and reliably back to base while in the field.

A combination of the Dejero GateWay mobile Internet connectivity solution and FileCatalyst Direct enables remote reporting teams to access their station's media asset management (MAM) systems – to source b-roll or background

video – to create fully packaged reports, news clips, and to upload complete stories faster.

FileCatalyst Direct allows broadcasters to send media content and digital assets globally at very high speed, ingest media from outside colleagues and production teams, and manage production, post-production, and editing locations. In addition, Dejero GateWay can offer FileCatalyst users the benefits of fast, reliable, and secure connectivity to the Internet, private networks, and cloud services while in the field

by blending cellular connections from multiple mobile network providers with other available wired and wireless IP connections. Dejero says its algorithms intelligently manage the fluctuating bandwidth of individual connections to provide the reliability and speed that broadcasters depend on, when and where they need it.

Visit [www.dejero.com](http://www.dejero.com) and <https://filecatalyst.com>



## Ross Video XPression Version 8.5

### ROSS VIDEO'S XPRESSION VERSION

**8.5** has been designed as an intuitive and cost-effective product which is

used in workflows from simple character generator tasks all the way up to complex virtual environments.

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Visit [www.rossvideo.com](http://www.rossvideo.com)



## Wisycom ENG Receiver

### WISYCOM'S MPR52-ENG DUAL-CHANNEL DIVERSITY RECEIVER

comes with two built-in diversity receivers with both analogue and digital outputs and has up to 790MHz bandwidth in the 470/1260MHz range, as well as multiband front-end filtering.

Country specific Surface Acoustic Wave (SAW) filters are also available (USA: 935-960 MHz and Japan: 1240-1260 MHz). This feature, combined with software selectable wideband and narrowband DSP-FM operation, gives users options to suit the needs of any production.

The receiver also boasts an extreme low-noise voltage-controlled oscillator (VCO) with automatic and ultrafast spectrum scanning, which works via infrared technology and can be controlled via USB with the Wisycom Manager Software. The MPR52-ENG is also DSP-based for extreme flexibility and multi-companding operations.

Matching the MPR30-ENG receiver offered by Wisycom, the MPR52-ENG features a dual diversity configuration with two whip antennas, along with convenient function buttons, such as a dedicated frequency scan option. Battery management is flexible and conducted via standard alkaline batteries or lithium battery packs that can be charged with the dedicated charger or through the micro USB connector.

Visit <https://wisycom.com>



## Studio Prompting on an iPad

**AUTOSCRIPT'S IEVO** is an application that allows one or more iPads to be connected directly to WinPlus-IP prompting software and used as teleprompter monitors, additional reference monitors, or operator preview monitors in any location on the network.

By purchasing a WP-i licence for WinPlus-IP, users can connect and display a prompted script on an iPad to provide a reliable, portable monitor for operators and talent. When connected to WinPlus-IP, Autoscript's fully IP-enabled prompting solution, an iPad with the iEVO app will show as a standard device within the WinPlus-IP device manager. Once selected in a licenced version of

the software, an iPad equipped with iEVO receives the prompting data from WinPlus-IP over Wi-Fi or wired ethernet adapter, enabling the script to be rendered so that the iPad becomes an additional monitor.

The iEVO app is available for all current iPad models running iOS 10 or higher and supported by Autoscript's WinPlus-IP, WinPlus-IPN, and WinPlus-IPS software version 1.3 or higher. Users may download the iEVO app free of charge from the Apple App Store and purchase WP-i licences to match the number of iPads required.

Visit [www.autoscript.tv/intelligent-prompting](http://www.autoscript.tv/intelligent-prompting)





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## How Method's Team Helped Create Winnie the Pooh

DISNEY'S LIVE ACTION TALE 'CHRISTOPHER ROBIN' brings A.A. Milne's characters to life for a new adventure into the Hundred Acre Wood. Creating the film's CG star, Winnie the Pooh, was a collective effort, with Method Studios using its extensive character animation experience to craft the soft-spoken bear's performance in the feature's first two acts. Method VFX Supervisor Glenn Melenhorst, whose animation experience includes creating the title characters for Ted, Ted 2 and The Spongebob Movie, guided the work of Method's Melbourne team.

"When Director Marc Forster began assembling the VFX team for Christopher Robin, he was especially keen to connect with studios that had digital toy experience so we walked him through our work on Ted though, unlike that film, Pooh is much more subdued, family-friendly and perhaps the most iconic stuffed bear," said Melenhorst.

The team worked closely with Production VFX Supervisor Chris Lawrence to shape the digital bear's performance. Lawrence noted, "Method's work with Winnie the Pooh was exceptional. The animation is nuanced and beautifully integrated into the shots, bringing the beloved bear to life and carrying some of the key emotional moments of the movie. Not only were Glenn and his team fantastic creative partners, they also went the extra mile to explore new approaches and ensure the performance would resonate. It was an absolute

pleasure collaborating with them."

Method Animation Lead Nick Tripodi oversaw refinement of the character's movements and hand gestures to make him feel alive but still an inanimate object. For research and development, artists manipulated stuffed toys and studied the friction and physiology of the motion, then used that as a guide to incorporate an appropriate jerkiness that was neither too mechanical nor too smooth. Physical props also inspired Method FX artists in developing the look for how various substances interact with the bear's fur, like of course, honey. In many cases, the team replaced almost all plate elements with digital versions for controlled macro shots.

On set, lead actor Ewan McGregor interacted with a featureless Winnie the Pooh-sized grey ball. After rotoscoping, Method's compositing team, led by Dom Hellier, worked to integrate the CG bear into shots, layering in atmosphere, steam and foliage. Said Melenhorst, "The scene with Pooh Bear and Christopher Robin in front of the massive oak tree was quite an undertaking. Plates were shot outside so we had to account for sunlight while also digitally extending the oak tree asset, building out the background and foreground foliage. The aim was a flat and graphic misty moor feel, and the team captured that essence perfectly."

Visit [www.methodstudios.com](http://www.methodstudios.com)

## cineSync Wins Technical Emmy

COSPECTIVE, THE AUSTRALIAN DEVELOPER of interactive video review software, cineSync, is to be awarded an Engineering Emmy for outstanding achievement in technical development.

Presented by the Academy of Television Arts and Sciences, Cospective received the award at the prestigious ceremony in Los Angeles on Wednesday, 24th of October, 2018. The American Emmy Awards recognise excellence within various areas of television and emerging media.

cineSync facilitates the review of visual effects in high-end film and television productions. Since its release, the software has served the media production industry to enable simple and effective collaboration for teams around the globe. Participants in a cineSync review session can watch and annotate on shots, frame-by-frame, in perfect synchronisation.

Game of Thrones VFX associate producer, Adam Chazen, said cineSync had helped with managing multiple vendors in multiple locations, overcoming distance and language barriers.

"cineSync is an essential tool for Game of Thrones. We have people working all over the world, so the ability to look, point, and draw on the same image is invaluable. cineSync helps to take away the guesswork and ensures everyone is on the same page," he said.

"Our business has grown as a result of the growth in television budgets, scales and viewership thanks to what is happening on Netflix, HBO and Amazon, among others," said Cospective Chief Executive, Rory McGregor.

"Supervisors, producers, directors, editors and more the world over have been able to improve their workflow. Productions no longer to meet in the same physical location, or get mired in reams of email chains when iterating on a visual element of a show.

"The television industry is more global today than ever before, with flagship

shows shot across numerous locations and post-production companies contributing diverse skill sets from across oceans. cineSync bridges that gulf. It fuses creative workflows across the globe, ensuring effective collaboration from concepts through to final edit.

"We are thrilled to have been recognised by the Academy of Television Arts and Sciences for this prestigious award. We created cineSync with the core goal of making global collaboration on complex creative projects accessible and simple for everyone involved in the process. We're proud to see all the incredible episodic television projects being created today with the help of cineSync and will continue to develop our technology to support the industry for years to come."

cineSync was first commercially released in 2005, with development led by Cospective CTO, Neil Wilson. In 2011, the software received an Academy Award for Technical Achievement from the Academy of Motion Picture Arts and Sciences. The platform has revolutionised the way in which studios and showrunners interact and present their post-production work, by allowing distributed teams to view and interactively comment on work in progress, in real time.

By facilitating communication in this way, a large shot tally can be produced and delivered by teams working remotely, enabling seamless global collaboration to ensure an aligned vision can be realised.

Recent updates to cineSync have introduced advanced features like watermarking, guest authentication, and encryption to benefit creative projects of all shapes and sizes. These features ensure quick and easy compliance with the ever-increasing security demands of the film and TV industry.

Visit <https://cospective.com>





## NZ Department of Post uses Resolve 15 for HDR and 4K Post

**BLACKMAGIC DESIGN HAS ANNOUNCED** that New Zealand's Department of Post is using DaVinci Resolve 15 as part of their HDR and non-HDR work with a number of film, commercial and television productions. This included colour correction, conform and VFX work for a number of different projects, including the popular TV show *Cul De Sac*. Department of Post is one of the most influential post production houses in Australia and New Zealand, providing post production services, including DIT, editorial, online, finishing, colour and audio for film and television productions, both local and international. Recently, Department of Post has focused on opening up New Zealand's first fully HDR compliant post workflow to a wider range of productions, using DaVinci Resolve Studio as one of the core components.

One of the primary uses of DaVinci Resolve 15 at Department of Post is as the post production software used for UHD and HDR projects, as part of one of the top HDR suites in Australia and New Zealand, where it has already completed HDR work for a number global projects.

"Resolve makes HDR workflow simple, and the addition of HDR internal scopes in Resolve 15 is great. Resolve 15's colour management in particular we use a lot. Now that projects are delivering in SDR and HDR, Resolve's node structure specifically helps us to handle complex workflows that allow us to do both passes on one timeline.



The Resolve colour management is similar to the ACES workflow, but more accessible to the broad range of productions we handle," said Katie Hinsien, Department of Post's Head of Operations.

With the inclusion of Fusion Studio VFX in DaVinci Resolve 15, Department of Post has also been able to handle grading, conforms and VFX work within a single application. "We recently had to use Resolve 15's Fusion features for VFX comps for an upcoming film. Screen replacements and background replacements. It was very

helpful and time saving to keep it all in DaVinci Resolve 15."

A non HDR project the Department of Post pro used DaVinci Resolve 15 on was *Cul De Sac*, which was completely conformed and graded using DaVinci Resolve 15. The show is a post-apocalyptic drama series where one day teens wake up to find the world has changed and includes no adults, no technology and no explanations.

"The look and feel was apocalyptic, with a specific colour palette. Resolve 15's hue v hue and hue v sat really helped maintain this. I also used 15's OFX lens blur strategically to increase depth of field and accentuate the character's feelings of alone-ness and despair. It's a great tool, as it really blurs like a lens, not like a blur," said James Gardner, Department of Post Senior Colourist.

Visit [www.blackmagicdesign.com](http://www.blackmagicdesign.com)

## R&S® SpycerNode – the next generation of storage for your media assets

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## Blackmagic Design Products Join Netflix Post Technology Alliance

**BLACKMAGIC DESIGN HAS ANNOUNCED** that it has joined the new Netflix Post Technology Alliance and that DaVinci Resolve, its professional editing, visual effects, motion graphics, colour correction and audio post production software, was chosen for three of the alliance's four technology categories: Colour Grading, Editorial, and IMF and Media Encoding. Blackmagic Design's URSA Mini 4.6K and URSA Mini Pro were also chosen in the alliance's 'Camera' category.

The Netflix Post Technology Alliance is a program for manufacturers of products that generate or manage any kind of sound data, image data, or metadata from production through post. The alliance is aimed at bringing together industry leaders committed to work closely with Netflix to innovate production workflows and support creatives globally.

To earn the ability to use the Post Technology Alliance certified logo, products must comply with current Netflix delivery specifications, and commit to future technical innovation and timely problem resolution. By being chosen by Netflix for alliance categories, filmmakers are assured the products meet a very high mark of quality, service and support.

DaVinci Resolve is used by post professionals all over the world, and has already been used for a huge number of films and TV programs shown on Netflix, including a number of Netflix originals such as *Daredevil*, *She's Gotta Have It* and *The Ranch*.

"Professionals creating films and episodic shows for Netflix have to focus on creativity, quality and being able to launch globally in multiple formats. So

having a post process that is efficient, easy to use and always improving is essential. We are honoured Netflix sees that DaVinci Resolve brings that in each of the software categories of the Post Technology Alliance," said Grant Petty, CEO, Blackmagic Design.

"At Netflix, empowering our creative partners is incredibly important, and the Post Technology Alliance will build a more seamless experience from production through post-production," said Chris Fetner, Director of Post Partnerships and Integrations at Netflix. "Products that bear the logo are committed to better interoperability and faster innovation cycles, which will allow artists to focus their energy on what matters most – the storytelling."

Visit [www.blackmagicdesign.com](http://www.blackmagicdesign.com)



## Grass Valley Delivers Ultimate Post Production Workflow with Rio

**GRASS VALLEY RECENTLY LAUNCHED** the newest version of Rio, the online editing and post production suite, providing users with more functionality including Dolby Vision support and best-in-class file compression for increased media availability on existing storage.

The latest updates in Rio v4.5.3 include:

- **Dolby Vision Support:** Rio provides faster, more flexible workflows to support Dolby Vision deliverables. With a Dolby CMU box, timeline trim passes can now easily be made across multiple display devices with all information stored in a single XML. All parameters can be controlled from the Neo panel with frame analysis choices that result in faster workflows on projects with long timelines.
- **Near Lossless Rendering:** Introducing a new compression codec, based on VC-2, that enables Rio to run from 2:1 to 6:1 compressed to disk (in addition to its standard uncompressed mode). If compression is selected, and once media is compressed onto a disk, the codec is virtually lossless across multiple renders, enabling users to store additional media at the same chosen compression ratios, increasing storage capacity by factor of 2-6 times.
- **Canon V2.2 SDK HDR/SDR Update:** With additional support for BT.2020 Hybrid Log Gamma color space and gamma curve to handle HDR and SDR in a single signal. Rio also provides added functionality with resize and debayer modes and camera name display.

- **Improved Stability:** The Alchemist re-speed algorithm has also been updated to provide improved stability and results.

Katsushi Takeuchi, Vice President and General Manager of Editing, Japan, Grass Valley commented, saying, "With a strong heritage for pushing the industry's boundaries for performance and creativity, Rio is a hallmark for the highest quality post production and finishing – from its real-time performance to its complete, integrated toolset and ultra-fast workflows. These new enhancements further fuel our customers' ability to deliver stunning images at any resolution or frame-rate."

Visit [www.grassvalley.com](http://www.grassvalley.com)

## AJA OG-Hi5-4K-Plus and OG-HA5-4K openGear Cards



**OG-HI5-4K-PLUS IS AN OPENGear CARD** that offers 3G-SDI to HDMI 2.0 conversion for 4K/UltraHD/2K/HD/SD sources, supporting up to 60p from professional 4K/UltraHD devices when monitoring to HDMI 2.0 displays. OG-Hi5-4K-Plus generates HDR metadata in accordance with HDMI v2.0a/CTA-861.3 and offers a simple monitoring connection from 4K devices with Quad 3G-SDI or Dual 3G-SDI outputs to compatible HDMI 2.0 displays, with two sample interleave (2SI) or square division (Quadrant) source mapping.

Designed for use in high-density openGear 2RU frames including AJA's OG-X-FR 2RU frame, new DashBoard Software support on Windows, macOS and Linux offers remote control and monitoring of the openGear architecture and provides convenient and industry standard configuration, monitoring and control options over a PC or local network.

Featuring four 3G-SDI outputs, the openGear compatible OG-HA5-4K enables high quality conversion of HDMI 2.0 video from DSLRs, mirrorless

cameras, action cameras, or prosumer 4K video cameras to 4K/UltraHD 3G-SDI for use in professional workflows.

Designed for use in high-density openGear 2RU frames including AJA's OG-3-FR 2RU frame, new DashBoard Software support on Windows, macOS and Linux offers remote control and monitoring of the openGear architecture and provides convenient and industry-standard configuration, monitoring and control options over a PC or local network.

openGear is an open-architecture, modular frame system designed by Ross Video and supported by a diverse range of terminal equipment manufacturers, including AJA.

The AJA OG-X-FR is a 2RU high openGear frame which is compatible with any openGear card and offers Dashboard support for the latest AJA Dashboard compatible openGear cards. The frame has a 20-slot capacity with excellent cooling capabilities for high-density applications and compatibility with advanced openGear connectivity options for supported cards.

Visit [www.aja.com](http://www.aja.com)





## Sony Unveils 4K HDR Monitor and TRIMASTER HX Brand

**SONY HAS ANNOUNCED A NEW** 31-inch Grade 1 reference monitor, the BVM-HX310, which offers accurate colour reproduction and high-contrast performance that provides assurance to professional content creatives in critical picture decisions. The launch of the new reference monitor also marks the introduction of Sony's new technology brand, TRIMASTER HX.

The BVM-HX310 has been created in response to the industry's desire to overcome the challenges of accurate picture evaluation, especially in black reproducibility. Accurately reproducing images down to individual pixels is possible, thanks to the combination of Sony's specified and dedicated panel and its newly developed display processing technology. The new monitor is capable of reproducing 4K and High Dynamic Range (HDR) content, supporting industry standard brightness of up to 1,000 nits in full-screen and a 1,000,000:1 contrast ratio for HDR productions.

"Drawing on decades of live and post-production expertise, the BVM-HX310 is designed to provide professionals with images they can trust, helping them work more efficiently and achieve better creative focus," explained Mr. Anthony Kable, Content Creation Group Manager, Sony Australia. "At Sony, we continuously work with our customers to offer solutions that help them overcome the challenges they face daily. The result of this process is that, together, we create innovative solutions like our new reference monitor."

Sony also introduced its new technology brand, TRIMASTER HX. HX represents the combination of both HDR ('H') and Liquid Crystal (Xtal) Display ('X') technologies. Monitors of this range offer the accuracy, consistency and quality of colour reproduction.

"TRIMASTER HX is the new umbrella brand that incorporates Sony's specified



million contrast LCD panel and its unique panel controlling technology to deliver consistent picture quality, accurate colour reproduction with the deepest blacks, and provides high-contrast performance consistent with our current award-winning reference monitor, the BVM-X300."

The BVM-HX310 hosts all major HDR EOTF and, for the first time in Sony professional monitors, 12G-SDI is supported to allow simple 4K transmission with a single SDI cable. It handles ITU-R BT.2020 colour space and HDR images with Hybrid Log Gamma (HLG), SMPTE ST2084 and 2.4 (HDR) gamma alongside S-Log2, S-Log3 and S-Log3 Live HDR for SR Live Workflow.

In addition, users can load predefined Look Up Tables (LUT) based on their viewing requirements onset or in post-production thanks to BVM-HX310's User LUT function. The existence of multiple EOTF in 4K/UHD, in addition to multiple colour spaces and RGB ranges, give rise to potential complexities in source identification.

The latest 4K HDR reference monitor incorporates Video Payload ID (VPID) which identifies signal information embedded in the SDI interface to help switch to appropriate display settings automatically – minimising the potential for human errors.

BVM-HX310 offers a Quad View mode, allowing professionals to view up to four customised individual display settings across the monitor in HD (including EOTF, colour space, transfer matrix and colour temperature), which was previously introduced on the PVM-X550. The mode will also support User LUT of the BVM-HX310.

Visit [www.sony.com.au](http://www.sony.com.au) or [www.sony.co.nz](http://www.sony.co.nz)

## Continuum Relaunches Particle Illusion Motion Graphics Generator

**FILM AND TELEVISION POST-PRODUCTION PROFESSIONALS** looking to add VFX tools to their workflows get a creative boost from Continuum 2019. Continuum 2019 is the newest version of the comprehensive plug-in collection from Boris FX.

New in Continuum 2019:

- **Particle Illusion:** The completely redesigned high-end motion graphics generator (sparkles, smoke, fireworks) features a speedy real-time GPU-based engine in a simple, easy-to-use interface. Includes new professionally designed presets, a revamped searchable preset emitter library, and is included in both Continuum 2019 and the Particles Unit.
- **Mocha Essentials Workspace:** Simplifies the power of Mocha with an updated interface, new magnetic spline tool with edge-snapping, a new freehand spline tool, new preset geometric shapes tools for easier effect masking and rotoscoping, and support for high DPI monitors. Mocha now supports point parameter tracking inside Continuum filters such as Lens

Flare 3D, Rays, and Spotlights.

- **Title Studio Improvements:** Title Studio adds the ability to apply GPU-accelerated effects directly inside its interface along with 150+ new professionally designed templates. A new grid and guide system, on-screen text tool, and on-screen text box make titling even easier than before. Now supports 8K or higher resolution.
- **External Broadcast Monitor Support:** The FX Browser and Title Studio now include support for external/client/broadcast monitor previews from a custom UI window. Currently only available for Blackmagic Design, AJA coming soon.
- **Simplified Avid Effects List:** The introduction of Mocha-based parameter tracking makes most non-real time blue dot filters unnecessary. Non-real time filters have been moved into an obsolete folder to support the older legacy Continuum tracker.

Visit <https://borisfx.com>

## AJA Adds UltraHD Support to IPR-10G-HDMI

**AJA VIDEO SYSTEMS HAS RELEASED** v1.1 firmware for its IPR-10G-HDMI Mini-Converter, which enables SMPTE ST 2110 IP video/audio to HDMI. Available as a free download, the update adds support for UltraHD up to 30p and integrates new improvements for discovery, registration and control.

The compact and fanless IPR-10G-HDMI Mini-Converter receives SMPTE ST 2110 over 10GigE connectivity and formats the data for output as video and audio on a full-size HDMI interface, with simultaneous analogue audio output via an RCA interface.

New v1.1 firmware for the device includes:

- Support for 10-bit, 4:2:2 uncompressed UltraHD (3840 x 2160p 23.98, 24, 25, 29.97, 30).

- Discovery, registration and control.
- NMOS.
- Ember Plus (Control only).

"We're excited to bring IPR-10G-HDMI users new UltraHD support with v1.1 firmware, as the update meets a critical need in the market, allowing professionals to output UltraHD signals across IP networks to the latest HDMI devices and displays," said Nick Rashby, President, AJA Video Systems.

IPR-10G-HDMI v1.1 firmware can be downloaded for free from AJA's support page. IPR-10G-HDMI is available through AJA's worldwide reseller network.

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## Former NFSA Deputy Ray Edmondson Receives AMIA Honour

**FORMER NATIONAL FILM & SOUND ARCHIVE** Deputy-Director Ray Edmondson has been awarded the inaugural Advocacy Award at this year's Association of Moving Image Archivists (AMIA) Annual Conference in Portland.

AMIA's inaugural Advocacy Award was presented to Ray Edmondson in recognition of his history of advocacy for cinema, archives and archivists around the world. In the art and science of archiving, Edmondson is one of the industry's most respected advocates, embodying what the award stands for. Described as the 'moving spirit' behind the creation of the National Film and Sound Archive of Australia (NFSA) in 1984, Edmondson was its deputy director until 2001, when he retired and was endowed as its first honorary Curator Emeritus. During his public service career, he devised and led corporately funded film restorations and pioneering programs like The Last Film Search and Operation Newsreel.

Edmondson, now Principal of Archive Associates Pty Ltd, has received numerous awards for his work, including the Medal of the Order of Australia (OAM), NSW Pioneer of the Year by the Australian Society of Cinema Pioneers, the SEAPAVAA (South East Asia Pacific Audiovisual Archive Association) Life Achievement Award, and the Distinguished Achievement Award of the Australian Society of Archivists, among many others. He is also a past recipient of the AMIA Silver Light Award.

Other 2018 accolades and recipients included:

- The Silver Light Award to Ken Weissman, recently retired head of the U.S. Library of Congress' National Audio-Visual Conservation Center.
- The Alan Stark Award to Jeffrey L. Stoiber, Assistant Curator for The L. Jeffrey Selznick School of Film Preservation at George Eastman Museum.
- The William S. O'Farrell Volunteer Award to Dino Everett, Archivist at the University of Southern California (USC) Hugh M. Hefner Moving Image Archive.

AMIA's Silver Light Award recognises career achievement in the field of moving image archives, including professional and volunteer works or activities, and contributions to preservation and restoration projects. Weissman has worked in film post-production and preservation for over 40 years. His career with the Library of Congress began in 1981 when he was hired as a film preservation specialist. As Supervisor of the Film Preservation Laboratory, he was involved in building and opening the lab at the Packard Campus for Audio Visual Conservation. In addition to directing the restoration of a wide range of films over



his career, Weissman was at the forefront of the efforts to design and implement a high-tech scanning system to digitally preserve and restore the Library's paper print collection of early motion pictures.

The Alan Stark Award honours individuals who have made a significant contribution through their efforts on a special project or in project management that contributes to, and supports, the work of moving image archives and/or the operations of AMIA. Stoiber has made educating the next generation a cornerstone of his career. Throughout his tenure as administrator of the L. Jeffrey Selznick School of Film Preservation, he has worked with over 250 students from 29 different countries.

The William S. O'Farrell Volunteer Award is named for long-time member Bill O'Farrell, honouring his volunteer efforts and mentoring role he played over the years to so many archivists. This year's recipient, Dino Everett, got his start running carbon arc projectors at a drive-in in the 1970s before spending most of his life as a touring punk rock musician. He ultimately got a job at the UCLA Film & Television Archive, which led to his current role at the USC Hugh M. Hefner Moving Image Archive, where he began a punk archive.

Everett specialises in unusual film formats and has published and presented articles both on the history and technology of the moving image field. He also actively supports the amateur's role in the history of cinema archiving and the safe use of archival originals.

Visit [www.amiaconference.net](http://www.amiaconference.net) and <https://amianet.org>

## DAMsmart Expands Archival Film Scanning Capabilities

### AS PART OF ITS CONTINUED EXPANSION

and commitment to the specialist needs of film archives within Australia and the Asia Pacific region, DAMsmart, one of Australia's leading media digitisation companies, has purchased and installed a new Muller HDS+ 2K/4K capable archival film scanner.

DAMsmart GM Joe Kelly explained the decision behind the major new investment saying, "This excellent scanner supports all 8mm, 9.5mm and 16mm film gauges – standard and super formats – and offers very high quality outputs for owners or custodians of archival film collections. The system has all the features expected of a dedicated archival scanner such as sprocket-less capstan transport, cool adjustable LED light source, laser registration and stabilisation, frame by frame scanning and support for magnetic and optical soundtracks."

Having the Muller HDS+ in their inventory now also enables DAMsmart to offer customers wetgate scanning for high value films and restoration projects – a first for 8mm and 9.5mm collections. The scanner Muller HDS+ has also been commissioned and its worth proven and recognised by many renowned film archives, film studios and media service providers all around the world.

Kelly continued, "By having our new Muller scanner at their disposal



DAMsmart clients are now able to order full preservation packages for their 8mm, 9.5mm and 16mm film collections in any resolution and file format up to 4K. They can also order restoration packages that utilise wetgate scanning, image stabilisation, dust and grain management and colour correction to enable the best image outcomes for preservation, exhibitions, websites, stock footage sales or even UHD/4K production using archival source material."

DAMsmart has digitised millions of feet of archival film for collection owners since the company launched eleven years ago and the company is renowned for the care and attention to detail they place on ensuring correct film handling, preparation and repair of even the most fragile and damaged films.

Joe Kelly concluded, "This new scanner and the new services we can offer as a result of acquiring it ensure that archival film collections can also be digitised and repurposed for consumption on multiple distribution platforms from the traditional to the latest 4K streaming platforms. It's taking digitisation and archiving in Australia and Asia Pac to the next level!"

Visit <http://damsmart.com.au> and <https://silvertrak.com.au>



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## SBS TV, DAMsmart Win Award for Excellence in Media Preservation

AT THE RECENT FIAT/IFTA Archive Achievement Awards, SBS TV and DAMsmart took the honours in the Excellence in Media Preservation category for SBS' Preserving Australian TV History Digitisation Project.

The award is the culmination of over five years of DAMsmart and SBS working together to digitise over 42,000 videotapes from SBS' broadcast archive. The collection contains truly unique content that has been created by the broadcaster to entertain, inform and engage multicultural Australia since 1980.

The content on Betacam, DVCPPro, MiniDV and 1-inch tape was digitised using Lossless JPEG2000 for preservation, DV50 for the broadcast master and an H.264 proxy. The digitisation project has transformed SBS's physical tape collection into a useable digital archive, ready for today's contemporary broadcast environment.

At the conclusion of the project, SBS, together with DAMsmart, nominated the project for the FIAT/IFTA awards. The awards developed by FIAT/IFTA, the International Federation of Television Archives, are designed to honour outstanding archival initiatives and projects in the international broadcast sector that significantly improve how the archives are preserved, managed and used.



Maddy Kortegast, SBS' Manager – Archives & Digitisation Project, said, "The FIAT Award win is fabulous international recognition of SBS' commitment to preserving its truly unique, multicultural broadcast assets for future discovery, education and enjoyment. It also highlights and acknowledges the superior work of all involved in the project, including our digitisation partner DAMsmart whose knowledge, professionalism and support was crucial to this success."

Key factors in the success of the project were: a strong working relationship between SBS and DAMsmart; the choice to take a standards-based preservation format as well as broadcast masters;

SBS' meticulous approach to metadata and content selection; maintaining access and control over a live working broadcast archive; and the high-quality of digitisation with almost zero file rejections.

Adam Hodgkinson, Business Manager at DAMsmart, said, "We are delighted that SBS were proud enough of the project to enter it into the awards. The award win is great recognition for the small and highly-efficient SBS archive team that have made this project a success. Our team at DAMsmart is dedicated to achieving the best digitisation outcomes for our clients and the fact that SBS chose to acknowledge our contribution to their project publicly, reaffirms our commitment to providing best quality outcomes."

He went on to say, "This was a satisfying project because it showcases the breadth of DAMsmart's technical and project management capabilities that delivered SBS with a digitisation service that they could be confident in. From the temporary relocation of the collection between Artarmon and Canberra, to digitisation, to QC workflows that delivered TX-ready files, we were able to provide SBS with a complete digitisation solution."

Visit [www.damsmart.com.au](http://www.damsmart.com.au)

## Quantum Enhances Xcellis Scale-out Storage

### QUANTUM RECENTLY ANNOUNCED

enhancements to its Xcellis scale-out storage appliance portfolio:

- StorNext 6.2 bolsters performance for 4K and 8K video while enhancing integration with cloud-based workflows and global collaborative environments.
- NVMe storage significantly accelerates ingest and other aspects of media workflows.

The introduction of NVMe storage to Quantum's Xcellis appliances offers ultra-fast performance: 22 GB/s single-client, uncached streaming bandwidth. Leveraging Excelero's NVMesh technology in combination with StorNext, all data is accessible by multiple clients in a global namespace, making it easy to access and cost-effectively share flash-based resources.

Quantum NVMe storage using Excelero NVMesh with Xcellis appliances offers industry-leading performance with 22 GB/s single-client, uncached streaming bandwidth.

As more organisations depend on broad collaboration among their staff to meet project deadlines and workflows extend from on-premise into the cloud, being able to effectively

manage and access data across complex, hybrid environments has become a requirement for modern file systems. Now with the ability to provide cross protocol locking for shared access across SAN, NFS, and SMB, Xcellis is an optimal solution for organisations that need to share content across both fibre channel and ethernet.

With StorNext 6.2 Quantum now offers an S3 interface to Xcellis appliances, enabling them to serve as targets for applications designed to write to RESTful interfaces. Organisations gain greater flexibility to use Xcellis as either a gateway to the cloud or as an S3 target for web-based applications.

Xcellis environments can now be managed with a new cloud monitoring tool that enables Quantum's support team to monitor critical customer environmental factors, speed time to resolution, and ultimately increase uptime. When combined with Xcellis Web Services – a suite of services that enables users to set policies, adjust system configuration, and more – overall system management is simplified and streamlined.

Quantum StorNext 6.2 also features new cloud-based monitoring tools, including:

- Enhanced Multi-Site Data Synchronisation – Available with StorNext 6.2, enhanced FlexSync replication capabilities enable users to create local or remote replicas of multi-tier file system content and metadata. With the ability to protect data for both high-performance systems as well as massive archives, users now have more flexibility to protect a single directory or an entire file system.
- Bolstered Functionality for Media Archives – Organisations that provide storage as a service to departmental users require additional management tools to support their business processes. StorNext 6.2 enables administrators to provide defined and enforceable quotas, implement quality of service levels for specific users, and allows for simplified reporting of used storage capacity. These new features make it easier for administrators to efficiently manage large-scale media archives.

Visit [www.quantum.com](http://www.quantum.com)

## Next Gen Storage Solution from Rohde and Schwarz

ROHDE AND SCHWARZ'S SPYCERNODE combines enterprise-class hardware with software technology. According to R&S, it is the first storage product on the M&E market to feature high performance computing (HPC).

R&S SpyceNode offers an easy-to-use interface, an HPC file system, erasure coding mechanisms and an expanded web-based device manager to simplify system configuration and maintenance.

R&S SpyceNode features IBM Spectrum Scale. The file system has proven itself in numerous HPC applications around the world. It simplifies and optimizes storage workflows, using features

such as single namespace, online scalability and information lifecycle management. The R&S SpyceNode stores files intelligently based on performance requirements. All R&S SpyceNode storage tiers are presented under a single namespace, which greatly simplifies file handling. The storage solution can be scaled as needed – even during operation. R&S SpyceNode provides scalability irrespective of the system size – starting with the smallest unit up to large systems.

The combination of a declustered array and erasure coding, in the event of disk failures, drastically speeds up rebuilding compared with traditional hardware-based RAID approaches.

Critical error conditions are detected and errors rectified immediately. R&S SpyceNode offers full redundancy even for single units, ensuring that media files will be securely and safely stored at any time.

R&S SpyceNode exhibits no single point of failure – neither in terms of hardware nor software. It protects the customer's business right from the start, no matter what the system size, thus protecting the customer's investment. The storage solution is available in different configurations from 2U12 up to 5U84.

Visit [www.rohde-schwarz.com](http://www.rohde-schwarz.com)





## Ooyala Flex Media to Support Interoperable Master Format

**IBC SAW OYALA PROVIDE EXTENDED** support for the Interoperable Master Format (IMF) with the Ooyala Flex Media Platform, Ooyala's flexible and configurable content supply chain optimisation platform that automates tasks, simplifies workflows, and speeds up time-to-market for content creators and distributors. With IMF support, customers of the Ooyala Flex Media Platform can significantly reduce the costs and improve the efficiency of their multi-version, multi-platform distribution needs.

IMF is a file-delivery standard created by the Society of Motion Picture and Television Engineers (SMPTE) that reduces the number of different versions of a video file required for distribution to viewers in different markets and on different platforms around the world. Prior to IMF, thousands of different versions of a widely distributed motion picture – reflecting various combinations of subtitles, metadata, audio, formatting and other features – would be required in order to support multiple-market-segment distribution. The efficiencies offered by IMF – increasingly embraced by major studios and SVOD services – have been estimated to achieve savings of 25% or more in storage and versioning costs.

"Ooyala is precisely aligned with IMF's goals, helping content creators and distributors streamline their operations to be more profitable," said Jonathan Huberman, Ooyala CEO. "Unlike other technology partners, Ooyala provides end-to-end support for IMF across the entire content supply chain. And with

seamless integration of existing tools into the Ooyala Flex Media Platform, we're enabling IMF strategies for companies who would otherwise lack the necessary technology. The technology community has been listening to content providers, and we're equipped to help them truly capitalise on global monetisation opportunities."

The Ooyala Flex Media Platform will enable an IMF workflow while still working with existing business-critical technologies. Among other features, the platform natively supports receipt of Interoperable Master Packages (IMPs) and transcodes them into renditions required for streaming to customer devices.

Ooyala will provide clients IMF support across all stages of the content supply chain, addressing a range of IMF requirements from asset management through processing, distribution and digital payout.

Ooyala developed the Ooyala Flex Media Platform to connect the entire video content supply chain for broadcasters and content owners, from production to profit. The Ooyala Flex Media Platform provides central workflows, shared metadata infrastructure and open APIs to integrate with existing systems and to provide a single source of truth for the content owners.

Visit [www.ooyala.com](http://www.ooyala.com)

## Interra Adds AI and Machine Learning to BATON QC

**INTERRA SYSTEMS HAS ADDED NEW** artificial intelligence (AI) and machine learning (ML) technologies to its BATON QC platform. At IBC2018 Interra Systems demonstrated BATON WINNOW, which expands the company's globally deployed BATON QC platform with an AI/ML-based feature set for content classification and compliance.

"BATON WINNOW employs AI/ML-enabled technology to recognise and tag content for classification and compliance. With our field-proven expertise in deep video and audio quality analysis, this major BATON add-on brings the complete content QC and content classification workflow tools under one umbrella and improves efficiency," said Sanjay Mittal, VP of Engineering at Interra Systems. "WINNOW is powered by AI/ML algorithms implemented using widely adopted TensorFlow framework and state-of-the-art computer vision algorithms. With these enhancements, BATON's feature-rich toolset goes on to save significant time and money for broadcasters."

Integrated with BATON, the new add-on can be deployed in both cloud and on-premises solutions. Based on content categorisation algorithms, BATON WINNOW classifies audiovisual content based on specified criteria, such as explicit scenes, violence, profane language, and more.

In addition, it relies on user-defined rule sets to automatically check compliance and identification of content against regulations in different countries, regions, and organisations. Since streaming media content is consumed by a massive range of audiences in different regions, it is imperative that broadcasters adopt a streamlined approach to eliminating offensive or explicit content that may not pass regulations in certain areas of the world. BATON WINNOW provides a focused approach for broadcaster workflows and regulatory compliance.

Visit [www.interrasystems.com](http://www.interrasystems.com)

## Bluefish444 Announce Kronos Support for ICE V3

**BLUEFISH444 HAS ANNOUNCED EXTENDED SUPPORT** for its KRONOS range with the upcoming Marquise Technologies ICE V3 release.

ICE has the widest range of IMF standard support, including App. #2, 2e (Studio Profile), App. #4 (Cinema Mezzanine), App. #5 (ACES) and Academy Digital Source Master, IMF ProRes RDD45 and TSP 2121 Application DPP (ProRes). Photon is also integrated, together with numerous validation tools for IMF and DCP packages. Key features of ICE 3.0 include the support of an unlimited number of independent subtitles tracks and audio channels (sidecar files), a dual viewport for version comparison, the display of safe area and a variety of audio and video scopes. ICE also integrates with a variety of automated QC tools and can load the QC reports.

"Marquise ICE and the KRONOS video hardware are a great fit for the strict requirements of 4K and HDR delivery," said Tom Lithgow, Bluefish444 Product Manager. "Marquise ICE performs the full QC of all modern delivery formats such as IMF, and when combined with KRONOS hardware, provides support for multi-channel 4k 60P and HDR/SDR 12/10-bit SDI workflows."

Bluefish444 have worked with Marquise Technologies for a number of years, and have proven support for MIST and ICE software. Bluefish444 recently demonstrated an advanced 4K HDR quality control workflow with ICE utilising KRONOS SDI output at IBC2018. ICE is the most advanced reference player for DCP, IMF and many other formats, with video and audio monitoring soon to be available via Bluefish444 KRONOS hardware.

"The new KRONOS product range expands the capabilities of our products to higher levels, particularly for 4K HDR and 8K workflows. Our solutions are now able to provide the users with two separate streams of 4K using only one card, allying both cost efficiency and technical capabilities," commented Laurence Stoll, CEO at Marquise Technologies.

Visit <https://bluefish444.com>

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## Sony High Res Mics Record World's First 108-Key Piano

**RECENTLY, FOUR WORLD FIRSTS OCCURRED SIMULTANEOUSLY** in the world of music and recording as Sony's new Hi Res Series Studio Microphones, a world first in themselves, were used to record the premier of Australian composer Alan Griffiths' new album *Rare View*. The performance was closely followed by a rendition of *Gigue Sonata in A minor*, a unique piece by Bach which has never been performed in public on a piano and all of these events were brought together on *The Beleura*, the world's first 9-octave, 108 key grand piano (most concert grand pianos have 88 keys), built by Stuart & Sons in Tumut, NSW, Australia.

As Sony Australia product manager David Green explained, "It boasts a gigantic nine octave range which was unheard of on the piano until now. Due to the incredible range and the immense cacophony of harmonics and high frequency overtones it takes a unique kind of microphone to fully record its range and beauty – which is where the Sony High Res 100 Series mics came in."

The recording took place at a concert held at the historic Beleura House, a venue that was formally owned by composer John Tallis. In 2014, house curator Antony Knight commissioned a 108-note Stuart & Sons piano to be installed in the house's new pavilion. Four years later, *The Beleura*, named after the house itself, was delivered and commissioned.

Green continued, "To celebrate this great occasion, as part of the concert Alan Griffiths, the well-known modern-day classical composer held the premier recital of his latest album *Rare View* at Beleura House. The original album was recorded entirely in the Hi Res recording format using the new Sony Hi Res Series studio microphones as was the performance which also featured premier musicians including Nicolas Young on piano, George Young on Cello and Dominic Prywana on violin."

The firsts didn't stop there as for the very first time another totally unique piece of music composed for an instrument that didn't exist at the time of composing and that was separated from it by 270 years, was performed to an audience on *The Beleura*.

*Gigue Sonata in A minor* was penned by JS Bach in 1728. Bach, one of the great pillars of western music, was an exceptional musician and master of church and cathedral organs and it was for these instruments with their extended lower register that he wrote the piece that was played on *The Beleura* at Beleura House and, which until that instrument was created, could not be performed on a Piano Forte.

The use of Sony High Res Series mics to record this historic event was no accident. In fact, it was Wayne Stuart, proprietor and head designer of the 108-note piano, who specified that *The Beleura* could only be recorded in the Hi Res format due to the incredibly high frequencies developed by the soundscape of the instrument which weighed in at 644kgs and boasted 218 strings spanning the 108 notes.



Sony's David Green at the Beleura with the company's new Hi-Res Series Studio Microphones

Green explained, "For the last 30 years, we have come to expect CD quality as the premium. However, with the introduction of Hi Res playback devices, speakers and headphones, for the first time in the history of music recording the microphone is actually the weak link with most commercial microphones rolling off at 20kHz whilst the Sony Hi-Res mics will recognise and pick up ultra-high frequencies up to 50kHz."

It was then the responsibility of industry expert Craig Field from Underwood Studios to record the performance with the Sony Hi-Res Series microphones in Hi Resolution audio, enabling the entire frequency spectrum of *The Beleura* to be faithfully reproduced.

Green concluded, "The Beleura House concert was an unparalleled success. By using Sony High-Res Series mics the holistic sound of *The Beleura* piano was beautifully and accurately reproduced including all of the ultra-hi frequencies that are normally lost with a CD quality recording. Listeners to the recording of the concert are now able to appreciate the incredible sound of this amazing instrument exactly how the musician heard it at the time of the performance."

To hear Sony's 100 Series High-Resolution microphone and the world's first 108-key piano create the first-ever High-Resolution recording of the *Sonata in A minor, BWV 965: VII. Gigue*, exactly as Bach wrote it go to: [www.youtube.com/watch?v=500QliUquqA&feature=youtu.be](http://www.youtube.com/watch?v=500QliUquqA&feature=youtu.be)

Visit [https://pro.sony/en\\_AU/products/studio-microphones](https://pro.sony/en_AU/products/studio-microphones)

## NZ Institute of Technology Goes Hybrid with Audient

**SPECIFYING AN AUDIENT ASP4816 CONSOLE** to be at the heart of Studio A completed studio upgrades at Waikato Institute of Technology (Wintec) earlier this year brought analogue back to the School of Media Arts' studio after a 13-year hiatus, a decision championed by Music Technician, Brad Morgan.

According to Brad, the original studio centred around an analogue console.

"Its age and maintenance downtime was becoming an issue and in 2003/2004 the decision was made to go to Pro Tools HD with a Control|24. The workflow was simple and the ease of an 'in-the-box' solution was convenient for staff and students.

"Fast forward 13 years and the decision to create a hybrid system taking in the best of both analogue and digital workflows was something that was welcomed with open arms. External gates/dynamics and effects racks that had been in storage for many years would now be reinstated.

"Students had experienced some level of tactile control with the previous system, but I knew that this system and workflow would not only sound

better, but also be of great benefit to their learning i.e. signal flow, bussing, external inserts, I/O routing from DAW, patchbay usage, analogue mixing as opposed to in-the-box."

Brad goes on to list the features of the desk he's most enjoying.

"Clean microphone preamps, musical EQ, buss compression and its routing possibilities, which are really impressive for a console of this size, footprint and price.

"What stood out to me were its routing possibilities," he explains, recalling the decision-making process. "I was looking for something that could be incorporated into the current patchbay system without having to completely rewire it. Our previous console was housed in an Argosy 90 Series desk. The dimensions of the ASP4816 were similar to a Control|24 and after some planning and modifications to the desk, was sure I could make it fit."

Visit <https://audient.com> and [www.wintec.ac.nz](http://www.wintec.ac.nz)



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## Neumann at Ninety

**FOUNDED IN BERLIN IN 1928 BY GEORG NEUMANN**, the Neumann brand, after nine decades, remains the gold standard in microphone technology.

Neumann.Berlin recently released a 50th Anniversary Rhodium Edition of its legendary U 87 studio condenser microphone, as well as a reissue of its U 67 – the tube microphone that “defined the sound of the sixties”.

While Neumann became part of the Sennheiser Group in 1991, its development team has continued to build on its 90-year legacy, which has also included customised sound production units for radio studios, theatres and concert halls, as well as phonograph record-cutting machines and the technology for many of today’s rechargeable batteries.

In recognition of this legacy, the Audio Engineering Society presented Neumann.Berlin with a 90th Anniversary ‘Service to Industry’ Award during the recent AES 145th Pro Audio Convention in New York City.

As part of 90th Anniversary celebrations, Neumann President Wolfgang Fraissinet visited the APAC region and spoke to C+T.

“We all know there’s a tendency going from the typical professional recording engineer, going to a professional recording studio and recording music there, towards very young people making recordings at home, putting them online without the whole process of this professional post-production process and everything we would call a professional recording chain,” says Wolfgang Fraissinet.

*How is that influencing product development?*

“For example, it will increase our team of software engineers. We will need hardware as we are standing for it for 90 years, and we will, of course, keep our long-established customer base of professional people in the music industry happy with the products we are making and we are standing for. We are now reissuing the U 67 microphone, which is an old product, but it’s now brand new. It’s exactly the same technical specs as the old days, but that’s for professional recording engineers.

“I wouldn’t see a hobbyist buying a microphone for USD\$7000 to record in the sleeping room or living room at home with a laptop for \$1500, you know? But, we have to increase the number of people who are trained to transfer practical processes from hardware into practical processes in the world of software.”

*What do you think of areas such as immersive audio or audio for virtual reality?*

“[Neumann and Sennheiser] see a lot of developments and needs in our labs where we stick our heads together and think about what can we as a whole, as the group, in order to support people who are having heavy needs for augmented reality, virtual reality sound. Sennheiser has a solution for that and gave a name to it which is AMBEO.

“That’s a technology which is not one product. It is a satisfying concept defined by Sennheiser for anybody who needs audio and recording solutions for the purpose of having spatial sound connected to video or maybe in a theatre house, or a live performance. You would not just need Sennheiser products for this or Neumann products for this, but at the time being the combination of, for example, Neumann’s studio monitors, and Sennheiser algorithms and software.

“Sennheiser just developed a VR microphone and it’s quite successfully finding its way into the VR world right now. A lot of people with 360 cameras are using it now, and Neumann is also thinking about audio solutions to serve that market for differently defined purposes of augmented reality.”

*Will there come a point when stereo is no more?*

“You could also ask me is there a point when mono becomes obsolete? The world today listens in more than 60% of all cases, to mono sources and nothing else. Stereo is the easiest way to have some kind of spatial image for music, just with two channels and with two microphones.

“With the help of software, it may be easy to split one source of audio signal into four channels in future, or even more and make it spatial-something, but the question is how much does it have to do with reality? Do you still feel that this what you hear, that would sound spatial, could be reality or is it just mathematics and signals diverted into different directions? For a video game, this may be fine. For a radio drama, it may be not good enough quality, so it really depends on the purpose.



**Neumann President Wolfgang Fraissinet.**

“Maybe, in a few years from now, we see holographs of artists in our living room in three-dimensional video, and you can walk around and listen to the person as if the person will be in your room and you hear it differently wherever you stand in your room and that would be pure algorithms because that cannot be microphone channels. Welcome to the world of software.”

*How do you see the status of recorded media versus streaming, especially given that we’re in the middle of a vinyl revival?*

“This vinyl revival situation is a hardware question. The streaming versus other way of hearing a concert is a business model. The Boston Philharmonic, for example, are only providing seats for less than 2800 people with a centre stage and people sitting around it with non-facing walls everywhere so that you don’t have conflict or effects, and you have a nice hearing experience wherever you sit. But, it’s only for 2800 people so the idea was why don’t we use it online and stream the concerts to people at home. The people in the Philharmonic house pay, say, 50 euros for the ticket. The people online pay 10 euros per concert, but the people online are 60,000 people and the people in the concert hall are 2800. It’s a business model.”

*Looking back over 90 years, are there any technologies the company developed that maybe didn’t take off, were ahead of their time?*

“Yes. Digital microphones, for example. Neumann developed a so-called Solution D system in the early 2000’s, and these microphones have been far ahead of their time. They are still brilliant tools for the ones who are using them and there is a customer group who is using them like the philharmonic house at Paris, for example, or the Casino de Monte-Carlo, famous places. But, since the standard which should have been supported by this Solution D technology, AES42, never did make its way into the industry to the concert manufacturers and all the other gear manufacturers, there was no chance for the digital microphone system alone to conquer the world. So, that is something a company like Neumann must be able to digest because it’s on us to develop things like that and offer them to the professional audio market. A single sound engineer in quantities cannot build these things for themselves, so he or she needs a manufacturer who has the guts to try these things and bring them to the table even when we don’t know whether it will turn into a fruitful business or not.”

Visit <https://en-de.neumann.com>





## Trilogy Previews New Mentor CX

**CLEAR-COM'S TRILOGY** recently showcased its new Mentor CX change-over unit during IBC2018. The Mentor CX provides automatic switching of video and audio test signals when used with main and backup Mentor RG Signal Pulse Generators.

The Mentor product family is suitable for any digital or mixed format environment where a high quality digital SPG is required. Mentor CX provides a manual or automatic changeover between a pair of Mentor RG generators, providing the maximum possible security for on-air applications.

The Mentor CX Changeover unit is designed to ensure timing and synchronisation of audio, video and timecode is not redundant in any broadcast or professional media application. The Mentor CX can monitor up to 22 channels of multiple types of digital and analogue signals, from both RG units, with any disruption of those signals facilitating a changeover to the secondary Mentor RG.

The Vector web management system makes configuration of changeover conditions simple and easy to manage. The CX's Vector also monitors and displays status of both Mentor RG's, including Sync, NTP and PTP health.

"With the forthcoming addition of the Mentor CX the market's latest and most accurate Mentor SPG system is now fully redundant with all video and audio test and synchronisation signals monitored and backed up," said Stephen Sandford, Senior Product Manager at Clear-Com. "The Vector browser-based management software, together with SNMP status, provides all the assurance needed to ensure stable and consistent timing signals in a broadcast station or truck."

Visit [www.clearcom.com](http://www.clearcom.com) and [www.trilogymcomms.com](http://www.trilogymcomms.com)

## CEDAR Trinity Enhance

**WE LIVE IN A WORLD WHERE** an increasing amount of evidential material is recorded every day, much of it captured on smart phones, CCTV systems and similar devices. These recordings tend to have one thing in common: background and environmental noise, making wanted speech difficult to understand, or at worst, unintelligible. To improve this, CEDAR has released Trinity Enhance, the advanced filtering developed for the CEDAR Trinity surveillance system, now available as an AAX, AU, VST2 and VST3 plug-in.

Trinity Enhance is simple to use but nonetheless an effective audio forensic toolkit comprising four related processes that suppress noise and enhance speech to increase intelligibility.

- 'Motor' removes steady noises such as engine rumble, mains hum, air conditioners and fans.
- 'Noise' reduces broadband noise.
- 'Background' makes background sounds appear louder relative to the foreground.
- 'Speech' enhances speech signals relative to other types of sound.

Trinity Enhance allows even novice users to clean difficult material to a standard that would have seemed impossible a few years ago, and although designed primarily for speech enhancement in the forensic laboratory, it can also be used to clean audio such as interviews and reports intended for broadcast.

Trinity Enhance is available from authorised forensic and surveillance dealer channel or, in other territories, direct from CEDAR Audio, and is authorised using the iLok and CEDAR HSP dongles.

Mac users require an iLok, whereas PC users require a CEDAR HSP dongle.

Existing dongles for CEDAR Studio and the CEDAR Trinity surveillance system may be used.

Visit [www.cedaraudio.com](http://www.cedaraudio.com)



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QARION Analog In connects virtually any analog audio source (mixers, audio consoles, music instruments etc.) to your AES67/RAVENNA™ network.

### QARION Analog Out



Hooks your analog audio devices to your AES67/RAVENNA™ network. Analog speakers, amplifiers, recorders or other audio interfaces can easily be integrated in your AES67/RAVENNA™ network.



## CRA in World-First GfK Radio Measurement Super Pilot

**PEAK INDUSTRY BODY COMMERCIAL RADIO AUSTRALIA** and global market research firm GfK have announced they will commence a world-first super pilot in the first half of 2019 to test the measurement of radio listening using a combination of diary and electronic meters.

Joan Warner, CEO of CRA, said the initiative would be the largest scale radio audience measurement pilot study using diary and electronic monitoring ever undertaken in the world.

"Listening is evolving and Australians are consuming radio in many ways, in many locations, across many different devices. We want to make sure we use all the tools at our disposal to get a holistic picture of radio listening.

"The current radio survey system is still the most accurate way to measure radio audiences, but if we can incorporate insights from electronic metering and streaming data to enhance this measurement, then we are keen to explore that," Ms Warner said. "The super pilot will allow us to investigate how data from different measurement techniques can be used together to develop a world first hybrid methodology for radio audience measurement."

The pilot will be conducted by GfK under the multimillion-dollar Measurement Innovation Program announced last year as part of the extension of GfK's radio surveys partnership with the industry.

Speaking at the Radio Alive annual national radio conference, GfK Managing Director for Australia and New Zealand, Dr Morten Boyer, said the pilot would involve participants in all five major metropolitan markets of Sydney,

Melbourne, Brisbane, Adelaide and Perth.

Participants will be required to simultaneously record their radio listening using paper or online listening diaries, wear an electronic meter in the form of a watch and install a smart phone app that picks up ambient radio.

"The pilot will allow us to better understand and quantify the differences in listening recorded across the different measurement techniques, and across various factors such as age, gender and time of listening. This rich dataset will feed in to the development of a hybrid measurement model that could incorporate the strengths of the diary system with the granularity offered by metering technology.

"Australia is an ideal test market because it's one of the strongest and most sophisticated radio markets in the world with high levels of technology use. There will be a lot of interest from other countries in the results of the study," he said.

Dr Boyer said wearable meters and apps were not capable of capturing all radio listening due to technology limitations and human compliance. A mini pilot conducted in September found that participants did not always wear the watch or have their phone in close proximity, resulting in 'lost listening'. The watch and app also cannot capture listening via earphones, while variations also exist in the capability of the app across different smartphones and environments.

Visit [www.commercialradio.com.au](http://www.commercialradio.com.au)

## Australian Radio Industry Unites to Grow Podcasting

**COMMERCIAL RADIO AUSTRALIA (CRA)** is to establish a Podcast Working Group, comprised of all major radio players – commercial, ABC, and SBS – to spearhead the development of the growing podcast industry in Australia.

Announcing the initiative at the Radio Alive 2018 national conference in Melbourne, Joan Warner, CEO of CRA, said the working group would be charged with developing an all-of-industry podcast strategy, including recommendations on measurement, promotion and research.

"Radio broadcasters are key to driving the growth and development of podcasting in Australia because of our expertise in the audio sector and our existing content production and marketing infrastructure."

Broadcast radio is highly regulated and audience measurement is tracked through the independently audited GfK Australian radio surveys. In contrast, the podcast industry is currently fractured, with no standard measurement system in place.

The Podcast Working Group will be chaired by Cath O'Connor, CEO of NOVA Entertainment. It will be charged with providing advice to the radio industry on four key areas: consumer promotion, audience measurement and reporting, market research, and education.



"Australian radio is already very active in the podcasting space and has invested heavily in both original and branded podcasting," Ms Warner said. "The Podcast Working Group will bring together specialists across audio content creation, research, measurement, marketing and sales, and will allow us to work together on the challenges and opportunities that impact the whole industry."

Mandi Wicks, Head of Radio at SBS also applauded the move, "Australia's multicultural communities continue to embrace SBS's language podcast services, delivering rapid growth in consumption. We welcome the opportunity to collaborate with the broader radio industry to provide the best experience for audiences and clients."

The Infinite Dial Australia report by Edison Research released in May found that 13% of Australians had listened to a podcast in the last week, while 88% had listened to Australian radio.

PwC's Australian Entertainment & Media Outlook report forecasted the number of monthly podcast listeners would grow to 8.9 million by 2022.

Visit [www.commercialradio.com.au](http://www.commercialradio.com.au)

## The Studio Partners with Veritonic on Audio Logos for Brands

**SOUTHERN CROSS AUSTEREOS (SCA)** client creative services team, The Studio, has announced an exclusive partnership with global leaders in audio benchmarking, Veritonic.

The partnership combines The Studio at SCA's audio creativity with Veritonic's ability to test and benchmark audio assets. For brands, it offers the ability to create world class audio logos, and test them for their ability to evoke chosen emotional attributes.

SCA's National Head of Radio Sales, Nikki Rooke said, "In an increasingly audio-connected world, many brands are realising the importance of having

a consistent audio approach to capitalise on the increasing time people are spending with audio.

"What we're able to offer with BRANDSOUND is an emotional match to a brand's visual assets. This means greater attribution of any advertising assets back to the brand, increasing brand fame and fluency across platforms."

The BRANDSOUND process uses a mix of artificial intelligence technology referencing millions of data points provided by Veritonic, and audience panel testing from SCA's own pool of almost 400,000 respondents.

Visit [www.southerncrossaustereo.com.au](http://www.southerncrossaustereo.com.au)





## Oz Radio Continues with Ad Sales Automation

**AUSTRALIA'S COMMERCIAL RADIO INDUSTRY** has announced it is moving forward to Phase 2 of an industry-wide project to automate and simplify the buying of radio advertising.

Phase 1 has resulted in the roll out of the AudioNET automated holding software RadioMATRIX. The industry wide system, live since October 2017 and paperless since July 2018, is now used by 131 advertising agencies and 380 radio stations.

The software allows agencies to interact with a radio stations' traffic management system electronically and without the burden of a previously excessive paper trail. Driving take up within the industry is the double

confirmation security strategy that ensures advertisers are correctly and securely linked to agencies.

AudioNET will continue to work collaboratively with radio stations, agencies and large direct clients to build on the RadioMATRIX platform and further streamline the radio buying process.

AudioNET Chief Executive Officer, Dave Cox said, "Over the next 12 months, Phase 2 will introduce an electronic bookings module for agencies and large direct clients. At the completion of Phase 2 the industry will be ready for the development, and testing with agencies, of a live e-trading platform."

Visit [www.commercialradio.com.au](http://www.commercialradio.com.au)

## Lawo's R3LAY 4.0 Debuts SMPTE 2022-7 Network Redundancy

**LAWO'S VIRTUAL RADIO SOFTWARE SUITE**, R3LAY, has received a major upgrade, adding many new features in Version 4.0, including compliance with the SMPTE 2022-7 standard, sometimes referred to as Seamless Protection Switching or 'hitless merge'.

ST2022-7 is an AoIP standard for simultaneous transmission of dual, identical audio streams via independent network paths. Products with this capability allow instant, undetectable switching to a backup network link should the primary be interrupted.

R3LAY v4.0 also includes a number of enhancements designed to make the premium R3LAY VRX8 Virtual Radio Mixer even more intuitive and flexible. New capabilities include:

- Multiple independent headphone controls for multi-mic talk shows.
- Preview of external audio sources from AES67 / RAVENNA network prior to fader assignment.
- Selectable audio processing with user-definable presets on PGM and REC busses.
- Support for GPIO control of VRX8 functions via open-source Ember+ protocol.
- Enhanced facility integration with remote switching of output streams now possible via Lawo VSM and Matrix Server software, as well as Ember+.

R3LAY users can download the v4.0 software directly from the Lawo Downloadcenter at [lawo.com/support/lawo-support/downloads.html](http://lawo.com/support/lawo-support/downloads.html). To obtain demonstration versions of any R3LAY 4.0 software, visit [www.R3LAY.com](http://www.R3LAY.com)



## WorldDAB Launches New International DAB+ Logo

**WORLDDAB, THE ASSOCIATION WHICH PROMOTES** DAB digital radio around the world, has announced the roll-out of a new DAB+ logo and marketing toolkit for international markets.

The logo and corporate design was originally developed by ARD in Germany and is now available to all DAB stakeholders. Free for use in promoting DAB+ to listeners, the new logo will for the first time ensure consistent marketing of DAB+ internationally. Available via the WorldDAB website, the logo is designed to improve consumer recognition of DAB+ across borders. The logo replaces the black and white DAB logo, which had been in use for more than a decade.

The new marketing toolkit includes design elements and strategies for on-air radio spots, online distribution, social media, point of sale material and consumer advertising. It can be fully aligned to the needs of each market, including the tagline which varies by country. Countries have the option to use 'more radio' or to develop a country specific message. The logo works hand-in-hand with the Digital Tick Mark and other technical logos.

The new logo and toolkit can be downloaded via [www.worlddab.org/technology-rollout/logo](http://www.worlddab.org/technology-rollout/logo)

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## Remote Broadcast for Automated Radio Workflows

**PART OF ENCO'S ENCLOUD FAMILY, WEBDAD** cloud platform provides users with a fully virtualised platform to remotely access and control their studio-based ENCO DAD radio automation systems.

WebDAD's user interface has been fully redesigned and optimised through an HTML5 architecture. The open, flexible nature of HTML5 programming ensures that broadcasters are no longer limited to specific web browsers, enabling complete native-level control from any workstation or mobile device.

"WebDAD's second-generation platform transforms the possibilities of web-based remote control across automated radio broadcast workflows," said Ken Frommert, President, ENCO. "Once limited to simple production tasks, we have broadened to include remote control opportunities across on-air presentation, playlist manipulation, voice tracking, and other critical tasks. Our HTML5-based re-design positions WebDAD as the most powerful and comprehensive browser-based interface on the market."

WebDAD gives broadcasters and production teams a direct line to DAD and complete control of the one-air interface over IP via any standard web browser.

This means that board operators no longer need to be physically at the radio station to control and playout a live radio show. WebDAD also introduces new operational efficiencies for full-time station personnel, and also allows part-time, contract, and remote staff to access the playout system from a laptop, tablet, smartphone or other connected device.

WebDAD expands the enCloud product line, which includes tools for mobile journalism and remote voice tracking.

Visit [www.enco.com](http://www.enco.com)



## DAB Digital Radio Sales Reach 70 Million Worldwide

**WORLD DAB'S LATEST MARKET REPORT HAS REVEALED** that, by the end of Q2 2018, over 71 million consumer and automotive DAB/DAB+ receivers had been sold in Europe and Asia Pacific – up from 58 million in Q2 2017.

The new data published by WorldDAB draws on multiple sources to give a comprehensive overview of the latest statistics on DAB receiver sales, road and population coverage, household penetration and the number of national stations on DAB/DAB+ compared to FM. The report covers Australia, Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Switzerland and the UK.

DAB is seeing significant activity across Europe, Asia, Middle East and Africa and the infographic also details the rollout status in 21 emerging markets including information on trials and population coverage.

Key findings from the report include:

- Almost 12 million receivers have been sold in Germany (11.8 million) and 17% of German households now own at least one DAB receiver
- In the UK, 64% of households have at least one DAB radio and digital listening has been in excess of 50% for three successive quarters
- Nearly 6 million receivers have been sold in Norway (5,600,000)
- In Switzerland, 63% of all radio listening is via digital platforms – with 34% via DAB+
- In Australia, 60% of new cars are now sold with DAB+, up from 47% in 2017
- Italy, France, Netherlands and Belgium have all shown positive signs of growth in the last year

According to Patrick Hannon, President of WorldDAB, "DAB digital radio continues to make significant progress in multiple markets. Cumulative global sales of DAB receivers now exceed 70 million units. It is clear that DAB is established as the core future platform for radio in Europe and Australia. Our next goal is to see similar developments in Africa, the Middle East and Asia Pacific regions."

Visit [www.worlddab.org](http://www.worlddab.org)

## DVR for Streaming Radio

### SAAS-BASED STREAMING SOLUTIONS PROVIDER

StreamGuys has unveiled SGrewind network DVR-like

(nDVR) functionality for live streams. SGrewind technology lets broadcasters automatically retain a rolling window of content from their live stream, giving their audience the ability to rewind, pause, or restart a stream from the beginning of a program.

SGrewind is a feature of StreamGuys' enterprise-class, cloud-based SGrecast live stream repurposing and workflow management system, which offers broadcasters a comprehensive platform for recording live streams and transforming them into revenue-expanding side channels and podcasts. The new feature gives listeners and viewers more control of their live streaming experiences by letting them pause and resume streams without missing any content; rewinding for a fixed time period; or starting the stream at a specific segment, similar to a television electronic program guide (EPG).

SGrewind technology supports a wide range of audience-empowering use cases. A listener could pause a live stream in the radio station's mobile app because of poor connectivity when getting onto a subway or elevator, then resume the stream from that point when subsequently re-opening the app. A viewer could access a broadcaster's live stream and jump back to the beginning of the most recent news, traffic or weather segment, providing quick access to what interests him or her most. In another example, someone listening to a news segment but only partially paying attention could rewind 15 or 20 seconds to focus on something they missed.

SGrewind-enabled live stream control will be available through StreamGuys' media players as well as third-party players and apps. SGrewind will be supported in StreamGuys' managed, embeddable SGplayer, while compatible players with rewind controls can be also generated from within SGrecast. An SGrewind API and URL-based control strings also allow customers to integrate SGrewind support into their own players and custom mobile apps.

Broadcasters with fixed schedules will be able to bring them into SGrewind to generate EPG-like controls. Rewindable streams will be available in both HLS and MPEG-DASH formats. Audio stream support will be available in the initial SGrewind release – currently slated for Q4 – with video support to follow.

Visit [www.streamguys.com](http://www.streamguys.com)



## Low Power FM transmitter

**THE RFE BROADCAST DS2000** is a new generation of low power 2kW FM transmitter.

Small in dimensions, only 2U rack and less than 15kg, features include 3500W General Electric power supply strong, reliable and easily extractable from the front panel, easily replaceable fan from the outside, no-dust filter that can be easily removed and cleaned. The DS2000 also offers a high-quality transmission, with low consumption and very low operating temperatures, and RF efficiency of over 85%.

The DS2000 also includes the Maximized Efficiency System (MES) – an intelligent system of automatic regulation of power devices working point that allows to obtain efficiencies RF/AC up to 85%, the Ultimate Audio Quality (UAQ) system that allows users to obtain audio quality levels higher than industry norm and an Intelligent Cooling System (ICS) which regulates the amount of cooling air according to the environmental conditions and the transmitter needs, with reduction of energy spent on cooling by up to 40%.

Visit <http://rfebroadcast.com>





## SBS Australia: Live from the Conflict Zone

**SCREENED EARLIER THIS YEAR**, the fourth season of SBS's award-winning documentary series *Go Back to Where You Came From* pushed the capabilities of traditional broadcast technology, bringing together different perspectives on the global refugee crisis to examine the issue in real time.

Over three nights, *Go Back To Where You Came From Live* gave Australian audiences a glimpse of today's greatest humanitarian disaster, through a mix of documentary elements and live crosses to participants on-the-ground in conflict hotspots to explore the complexity of mass human migration and its ripple effects in 2018.

SBS and production company, CJZ, embraced the opportunities afforded by broadcast technologies by

repurposing remote news gathering tools to give Australians an insight into the reality of life for refugees in some of the most remote locations in the world.

Equipped with Sony HD ENG cameras, SBS teams relied on the BGAN (Broadcast Global Area Network) satellite service, TVU Networks bonded cellular technology, as well as a portable SNG (Satellite Newsgathering) unit to capture and send live footage via the Internet over satellite. The use of bonded BGANs allowed the teams to transmit the higher quality footage for television broadcast, while handbrake software technology was essential to compress picture quality to enable live vision to be sent via satellite. Skype, WhatsApp and satellite phones were also crucial to connect teams on the ground with Australia.

*Go Back To Where You Came From Live* brought together live broadcast feeds from Syria, Turkey and South Sudan, with stories evolving in real time. The live nature of the broadcast was quickly highlighted as participants, politician Jacqui Lambie and immigration lawyer Marina, were forced to relocate to safety from the city of Raqqa in Syria, when they were confronted with gunfire from nearby IS fighters before the first episode went to air.

According to Noel Leslie, SBS' Chief Technology Officer, *Go Back to Where You Came From Live* is SBS' most ambitious television event to date, using modern broadcast technologies to highlight the sheer scale of the global refugee crisis.

"These locations, and many like them," he says, "are both disconnected and unpredictable so our compact, portable newsgathering devices have enabled teams to go into these remote areas to give displaced individuals a voice and raise awareness of the realities of the crisis.

"If we're sending people into Syria, Sudan and Turkey, we're not rolling out with a great big SNG truck because that would, obviously, not go terribly well in those territories. I think one of the biggest challenges we have is how do we get into those territories with stuff that's portable and discreet and isn't going to attract attention, because if you have people with cameras, you get a crowd around you.

"We're used to getting in and out of those territories and that's where the mobility and the portability of the equipment is key and even little things like the latest generation of TVUs are half the weight of the previous iteration. When you're sending one person in with a camera, a TVU pack, there's a fair amount of weight they're carrying so we need to be mindful of how they get in and get set up and do the shots themselves.

"I think what's innovative about this for us is just to use some good old TVU packs and BGANs. When we're in the Sudan, let's put it this way, there's not a lot

of 4G around, so we've had to be quite creative in terms of how we get access to get that footage back to us here [in Australia]. There's been a lot of work in terms of testing what we think are the lowest bitrates we can get away with in certain areas and just the unpredictability that comes with having satellite links.



SBS' Chief Technology Officer, Noel Leslie.

"I think that's the bigger technological challenge. Then, it's how we bring all that back into a live studio setting. We've got Ray Martin and Janice Petersen, who are hosting it and, again, a big challenge of the control room is just making sure those links are staying up and knowing when we can cut live to the different countries and then bringing that all back into a coherent package for the viewer.

Pre-produced

packages were also crucial to the programme, given the unreliable communications environments in the territories covered.

"We had a moment where we lost the link from Sudan for probably 20-30 seconds but in terms of live TV, that's an eternity," says Leslie. "So, we obviously have to make sure we've got other packages we can either go to or we link up to another country."

According to Leslie, crews would produce the packages prior to the live programme and transmit them back to Australia for editing.

"When you know that the environment is one that's hostile in a radio communications way - as well as a human way - I think you just need to be a bit more prepared. That's why we'll have alternative content we can go to."

The scope of *Go Back To Where You Came From Live* goes beyond the live programme and pre-produced packages. There are also complimentary On-Demand and catch-up assets available.

"We're streaming it live and then we will also, as we would do in most of our content, we'll put it up as a cache so it's both on SBS and on SBS On Demand," says the SBS CTO. "We recently made the investment with Amazon around some Elemental encoding and transcoding and I'm glad to say that that's now being used in earnest.

"The first episode was a long cache of about 20 minutes after, so we're trying to turn those things around quickly. If you haven't had an opportunity to watch it live, then obviously you can pick it up on SBS on demand, which is a very strong offer for us now. I think we have 5.4 million registered users on SBS On Demand. If you went back 18 months ago, I think we were down at 200,000-300,000. There are just people that are expecting to be able to find things when they want it on a platform of their choosing. We have to move to where the audience is and that's a big part of the audience now."

Visit [www.sbs.com.au](http://www.sbs.com.au)

## MediaHub Delivers with Expanded Offering

**AN EVOLVING SUITE OF SERVICES** and the further adoption of commodity enterprise technology. They're the key ingredients in a modern media services facility, according to MediaHub Australia CEO Alan Sweeney.

"MediaHub was conceived back in 2008 where all of the broadcasters actually got together and decided, with a move across into the digital world away from analogue, that instead of each spending their money they would be better off if they actually pooled all their money and built one facility. "When MediaHub first started, it was built on purpose to just be playout for the ABC and for WIN. It probably took something like 18 months to two years for us to bed that all down and get that right. The plan always was – and it came to fruition – that we would then go to the market with the services that have been proven on behalf of these two clients. And, that was achieved by 2012. MediaHub's first third-party client was SBS."

From a starting point of just six television channels, MediaHub is now charged with delivery of over 400, as well as radio for the ABC and streaming services.

"We're now lucky enough to have Imparja as a client, 7flix as a client, Sky News, ABC Plus as it was then, which is now ABC Australia, so it's just been a continual growth," says Feeney. "We had Fox National Geographic which was a wonderful client and we are very close in the contract stage with other clients right now, so very shortly, we'll be announcing more clients as well."

As well as the customer roster, MediaHub continues to expand in adoption of technology.

According to Alan Sweeney, "There's been a real move by the whole of the industry, and I think the broadcast industry is a bit behind other industries, where COTS platforms, basic computer platforms such as HP, they've become much more important than the traditional vendor boxes. And, the vendors themselves, even though they've been slow, they've moving very, very strongly now for the delivery of services and automation systems and the other ancillary systems in a generic platform that can work off any computer platform.

"The other interesting thing that happened over the last five years is that there was a real recognition by broadcasters themselves that playout itself is not enough to justify the economics and the growth of their businesses, and the shift away from them being involved in all of their technologies and worrying about where technology is going and how they deliver their product to a recognition that the full end-to-end value chain must be released. In that time,



MediaHub has therefore moved away from worrying about playout as our major product. It is our major product. It's the core. It's the heart of what we do, but we've put a lot of focus into the other products, which are in that end-to-end value chain for the delivery of services to our clients."

As a consequence, the company now offers PresHub presentation suite hire, XCodeHub transcoding services, ArkHub archiving, StreamHub streaming services, FibreHub connectivity to all major providers, MAMHub media management, Master Control and NOC facilities, compliance recording, virtualisation, datacentre services, disaster recovery, and technology support and development.

"There are another five [services] sitting behind which are very close to realisation and they'll all come out in the next three to six months," says Sweeney. "As we've built this out, we really needed to be sure. We really needed to be sure that we had a platform that we can rely on, and in that process, we ran a lot of POC's. We compared a lot of different computer platforms, and it became fairly apparent to us that one of the leaders in that space both in terms of the compute power, the reliability and the economics – the commercial reality of life – was HP. We partnered with HP and we have continued to build out our platforms.

"We also recognise that the industry was changing, away from vendor into sitting on a broader compute base, but at the same time, moving away from SDI, the broadcast transfer medium, into IP. That also allowed us to do that at the same time. MediaHub has been building out all its IT and IP capabilities in the same time that we've been looking at moving across into a COTS-style platform.

"It's been a very, very interesting journey for us, and the message we want to get across is that MediaHub offers a massive range of services. They're proven services. They're not aspirational. We do it all day, every day on behalf of our clients, and there is such a range of products that we can assure you that we deliver that full end-to-end service."

Visit [www.mediahubaustralia.com.au](http://www.mediahubaustralia.com.au)

## Switch Media Partners with Telaria for Addressable OTT Ads

**ADVERTISERS WILL BE ABLE TO TARGET** more addressable advertising to audiences across Video on Demand streaming services, following an upgrade of Switch Media's AdEase platform to be interoperable with video advertising management software Telaria.

The move, by one of the world's leading cloud-based streaming technology companies, to include interoperability with the Telaria software platform into its AdEase product, creates market-leading capabilities that enable publishers to offer advertisers a seamless and addressable ad offering across IP-based Set Top Boxes.

AdEase benefits publishers and advertisers by improving the user experience and allowing for more engaged customers, with individual or household targeted ad insertion for on-demand. The AdEase solution is expanding the number of addressable opportunities through easy integrations, and by maximising, and protecting ad revenue by surpassing most ad blockers.

According to Switch Media's Product lead for AdEase, Tim Armstrong, "In

addition to seeking innovative ways of monetising their audiences across Connected TV's, content providers must provide advertisers with more data-rich and automated ways to connect their brands with consumers. Delivering seamless server-side targeted mid-roll ads on Connected TV's has been a challenge or restricted by legacy workflows, yet at the same time as advertisers, content providers and, most importantly, users continue to demand more.

"Using the traditional methods of inserting mid-roll ads client-side creates an undesirable ad experience and we've also seen a lot of TV's simply unable to cope.

"This partnership sees technology improve the user experience and drive more verified targeting. Content owners can now provide more opportunities for advertisers to target and capture audiences consuming content at their convenience on the big screen."

Visit [www.switch.tv](http://www.switch.tv)





## Omnitek Demonstrates Video Chipsets

**DESIGN CONSULTANCY AND TEST AND MEASUREMENT** manufacturer Omnitek displayed its AV over IP, video Warp chipset solutions and FPGA IP-cores at IBC in Amsterdam, giving equipment manufacturers more access to the company's expertise in 4K and higher resolution video designs.

Omnitek's silicon chipset solutions are alternatives to ASIC and other ASSP devices, using system-on-chip technology that delivers multi-function video processing features, currently only available using combinations of discrete devices. Alternatively, these off-the-shelf IP solutions are also customisable to manufacturers' specific feature requirements, to create a bespoke device for the customer.

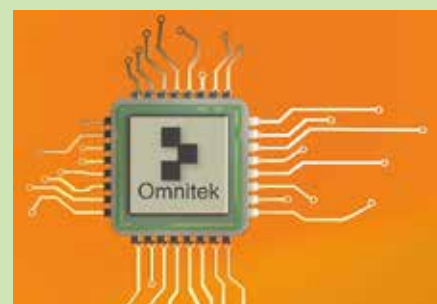
'Javelin' AV-over-Internet Protocol uses on-chip H.265 video compression for high quality transmission and reception of 4Kp60 video, targeted at ProAV and Broadcast products. Javelin can support both 12G-SDI and HDMI 2.0 inputs and outputs and is aimed at products requiring low bandwidth with lowest latency transfer of 4K resolution material. Omnitek's implementation and enhancement FPGA IP at the heart of Javelin will be demonstrated as a live 4K encode to decode path over a 1Gb/s IP connection.

Omnitek's 'Flex' 4K and HD Warp solutions provide live image warping aimed at the small projector and digital signage markets. These solutions provide all of the standard image adjustments such as keystone, barrel,

pin cushion correction as well as the ability to perform arbitrary image distortions. Omnitek's Warp IP underlying the Flex solutions was on show demonstrating live 4Kp60 image warping for high resolution applications. A Flex PCB for the reference design was also on display.

The Warp FPGA IP-core is optimised to create arbitrary image warps on live video streams up to 4096 x 2160 at 60Hz. Maximum image quality is achieved via per-pixel filtering and bi-cubic interpolation on 4:4:4 video data at up to 12 bits per colour plane. Alternatively, a single warp processor can process multiple HD video images and stitch the resulting videos together to create a surround view from multiple cameras. Or images can be warped and blended to project a large image from multiple projectors onto tilted and non-linear surfaces. The IP core fits into a single mid-range FPGA with a single DDR3 SDRAM interface, providing a highly cost effective solution.

Visit [www.omnitek.tv](http://www.omnitek.tv)



## Media Links Expands MDP Series of IP Media Gateways

**AT IBC 2018 MEDIA LINKS SHOWCASED** its new solutions for delivering and receiving video, audio and data quality to and from the network edge. The MDP Series addresses the real need in the marketplace for compact and portable, tightly integrated, affordable and easy to use platforms that enable the transport and delivery of real-time IP media services.

The new MDP3040 IP Media Gateway made its debut at IBC. This multi-channel device is a two channel 4K/UHD TICO lightweight compression encoder/decoder, supporting several configurations. Two 12G-SDI inputs can be TICO encoded and transmitted over dual 10GbE network trunk interfaces or two TICO encoded network streams can be simultaneously received and decoded as two 12G-SDI outputs.

For delivering 4K/UHD signals over existing 3G-SDI infrastructures, the MDP3040 can function as a standalone two channel 12G-SDI input to two channel TICO compressed BNC output encoder, or as a two channel TICO compressed BNC input to two channel 12G-SDI output decoder.

Dual 10GbE trunk interface along with hitless switching provide high levels of network redundancy and video/audio protection. In addition, 4K frame synchronisation, SMPTE 2022 conformance, source ID Generators and HDMI monitor output are all part of the basic package. Due to its combination of

high performance and versatility, broadcasters can use the MDP3040 for both remote venue transport as well as in-studio compression/decompression applications.

The second generation MDP3020 also came to IBC with new features. These include support for both 3G/HD/SD uncompressed as well as J2K compressed video, two channels of bi-directional hitless data, and both 10GbE and 1GbE dual network trunk interfaces. The unit's LLDP trunk diagnostic and keepalive mechanism now interoperates with Media Links' MD8000 product family, MDX switches as well as other MDP3020 units.

A new rack-mountable 1RU MDP Series Multi Unit Power Supply is also available, which powers up to any combination of eight MDP3020 or MDP3040 units with redundant power.

Media Links' IP technology supports video, audio and data distribution over an IP network, replacing traditional dedicated switchers and encoding devices. Both the MDP3040 and MDP3020 are integrated with Media Links' ProMD EMS Enhanced Management System for device configuration, service activation, overall system element management, as well as real-time monitoring and troubleshooting of network elements.

Visit <http://aus.medialinks.com>

## Agama and THEO Technologies Announce Strategic Partnership

**AGAMA TECHNOLOGIES AND THEO TECHNOLOGIES**, provider of the universal video player THEOplayer have announced that THEOplayer is fully integrated with the Agama OTT service assurance solution.

As a result of this partnership, OTT video service providers will be able to combine both technologies to enable services with the highest video quality across all browsers and devices, leverage unrivalled analytics capabilities and provide superior customer experience.

Agama's OTT solution offers transparency of service performance and customer experience, from service creation in the head-end, across delivery networks and all the way to the individual customer's app or device. With unique analytics, visualisation and integration capabilities, Agama enables operators to implement a data-driven way of working across departments

and workflows. The Agama solution empowers operations, product management, marketing and customer facing teams to drive customer satisfaction, lower operational costs and increase agility.

THEO Technologies is a technological front-runner in the online video playback space aiming at facilitating the perfect video experience on any platform or device. Its THEOplayer is a universal video player, HTML5 based, supporting every platform and device via a set of different SDKs. THEO Technologies delivers the most performant video playback technology: superior viewer experience in terms of latency, start-up time, seeking time, etc. and the most advanced feature set and functionalities.

Visit [www.agama.tv](http://www.agama.tv) and [www.theoplayer.com](http://www.theoplayer.com)

### ADVERTISER INDEX

Amber Technology.....	9
Blackmagic Design.....	11
Chinamedia.TV.....	IBC
EMC.....	5
Fujinon Fijifilm.....	46,47
Grass Valley.....	19

IRT Communications.....	10
Jands.....	37
Magna Systems & Engineering.....	IFC
MediaHub.....	3
Mediaproxy.....	33
Ooyala.....	OBC
Professional Audio & Television...Cover,7,21,39	

Rohde & Schwarz.....	29
Ross Video.....	25
Seagate/Lacie.....	27
Silvertrak/DAMsmart.....	13
Sony Australia.....	15
Stagetec.....	20,41
Techtel.....	6

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## The Dawn of a New Era

As well as the features below, EVERY ISSUE of Content+Technology contains features on the following:

- Image Acquisition
- News Operations
- Sportscasting
- Post-Production & VFX
- Media in the Cloud
- Digital Asset Management
- Audio
- Radio
- Content Transmission & Delivery
- Signal Distribution
- Command & Control – Automation, Monitoring, Systems Management.

## C+T AUSTRALIA-NEW ZEALAND FEATURES + DEADLINES 2019

ISSUE	EDITORIAL + AD DEADLINES	PUBLICATION DATE	PRODUCT ROUND-UP	SHOW COVERAGE
<b>February</b>	<b>Editorial Submissions:</b> 16-01-19 <b>Ad Bookings:</b> 23-01-19 <b>Ad Artwork:</b> 30-01-19	2nd Week February	+ Broadband & HbbTV + Multi-screen Delivery + Social Media + Studio/Facilities Directory	+ Preview: Mobile World Congress + Review: CES 2019
<b>Mar-April</b>	<b>Editorial Submissions:</b> 01-03-19 <b>Ad Bookings:</b> 04-03-19 <b>Ad Artwork:</b> 11-03-19	3rd Week March	+ Digital Asset Management Solutions + Content Delivery – RF, Fibre, Wireless and more.	+ Preview: NABshow19 April 06-11, Las Vegas
<b>May-June</b>	<b>Editorial Submissions:</b> 24-04-19 <b>Ad Bookings:</b> 02-05-19 <b>Ad Artwork:</b> 09-05-19	3rd Week May	+ Sports Production Solutions + Drones & UAVs + OTT/IPTV/VOD Solutions	+ Preview: BroadcastAsia /ConnectAsia 2019 June 18-20, Singapore
<b>July-Aug</b>	<b>Editorial Submissions:</b> 17-06-19 <b>Ad Bookings:</b> 19-06-19 <b>Ad Artwork:</b> 24-06-19	1st Week July	+ 4K Acquisition & Delivery Solutions + IP-based Production + Content Security	+ Preview: (SMPTE Australia) Media+Entertainment Tech Expo July 18-20
<b>Sept-Oct</b>	<b>Editorial Submissions:</b> 09-08-19 <b>Ad Bookings:</b> 16-08-19 <b>Ad Artwork:</b> 23-08-19	1st Week September	+ ENG/Newsroom Systems + Compression, Encoding, Transcoding Solutions + Radio Technology	+ Preview: IBC Amsterdam Sept 12-18 + Preview: National Radio Conference
<b>Nov-Dec</b>	<b>Editorial Submissions:</b> 17-10-19 <b>Ad Bookings:</b> 23-10-19 <b>Ad Artwork:</b> 01-11-19	2nd Week November	+ Channel-in-a-Box Solutions + Cable & Satellite Delivery + Production, Post & Locations round-up	+ Preview: Screen Forever Conference

## C+T ASIA FEATURES + DEADLINES 2019

ISSUE	EDITORIAL + AD DEADLINES	PUBLICATION DATE	PRODUCT ROUND-UP	SHOW COVERAGE
<b>Mar-April</b>	<b>Editorial Submissions:</b> 11-02-19 <b>Ad Bookings:</b> 13-02-19 <b>Ad Artwork:</b> 13-02-19	3rd Week February	+ HDTV & Beyond + Broadband & HbbTV + Cloud Technologies + Digital Asset Management Solutions + Content Delivery – RF, Fibre, Wireless and mobile.	+ Preview: ABU Digital Broadcast Symposium March 4-7, Kuala Lumpur + Preview: NABshow19 April 06-11, Las Vegas
<b>May-June</b>	<b>Editorial Submissions:</b> 24-05-19 <b>Ad Bookings:</b> 31-05-19 <b>Ad Artwork:</b> 03-06-19	2nd Week June	+ Channel-in-a-Box Solutions + OTT/IPTV/VOD Solutions + Sports Production Solutions + Production, Post & Locations round-up	+ Preview: BroadcastAsia /ConnectAsia 2019 June 18-20, Singapore
<b>Aug-Sept</b>	<b>Editorial Submissions:</b> 24-07-19 <b>Ad Bookings:</b> 31-07-19 <b>Ad Artwork:</b> 14-08-19	3rd Week August	+ Loudness Solutions + Cloud Solutions + Content Security + Compression, Encoding, Transcoding Solutions	+ Preview: BIRTV (Beijing, China) + Preview: IBC Amsterdam Sept 12-18
<b>Oct-Nov</b>	<b>Editorial Submissions:</b> 01-10-19 <b>Ad Bookings:</b> 08-10-19 <b>Ad Artwork:</b> 15-10-19	3rd Week October	+ Cable & Satellite Delivery + Digital Asset Management Solutions + OTT/IPTV/HbbTV Solutions	+ Preview: AVIA (CASBAA) Asia Video Summit + Preview: Broadcast Indonesia



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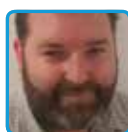
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